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MARINE CORPS ORDER 3500.48A

From: Commandant of the Marine Corps
To: Distribution List

Subj: AVIATION TRAINING AND READINESS (T&R) MANUAL, AH-1
(SHORT TITLE: T&R MANUAL, AH-1)

Ref: (a) MCO P3500.14H
(b) MCO 5215.1H

Encl: (1) T&R Manual, AH-1

1. Purpose. To publish policies, procedures and standards regarding the training of AH-1 aircrew per reference (a).
2. Cancellation. MCO 3500.48.
3. Background. Significant changes to reference (a) directed a revision to this Manual in the following categories: Unit Mission Statement, Unit Core Capability Statement, Unit Mission Essential Task List, Unit Core Skill Proficiency requirements, Unit Instructor requirements, and T&R syllabi structure. Reference (a) prescribes a unique template to provide the aviation commander with standardized programs of instruction. As such, this Order deviates from the five paragraph order format outlined in reference (b).
4. Recommendations. Recommended changes to this Order are invited and will be submitted via the syllabus sponsor and the appropriate chain of command to: Commanding General, Training and Education Command (C 4610), Marine Corps Combat Development Command, 3300 Russell Road, Quantico, VA 22134-5001.
5. Applicability. This Manual is applicable to the Marine Corps Total Force.
6. Certification. Reviewed and approved this date.


J. N. MATTIS
By direction

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AH-1W PILOT

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100. MARINE LIGHT-UTILITY ATTACK SQUADRON (HMLA) UNIT CORE COMPETENCY

1. Background. Marine Aviation plays a crucial role in the MAGTF's ability to conduct Maneuver Warfare. The ultimate goal of Marine Aviation is to attain the highest possible combat readiness to support Expeditionary Maneuver Warfare while at the same time preserving and conserving our Marines and equipment. Embedded within our combat readiness is the ability to rapidly, effectively, and efficiently deploy on short notice and the ability to quickly and effectively plan for crises and/or contingency operations thereby ensuring Marine Aviation remains ready for combat when and where the need arises. The AH-1W T&R Manual represents the collaborative effort of AH-1W Subject Matter Experts who designed training standards to maximize the full combat capabilities of the AH-1W and its crew. These standards, intrinsic in the core competency section, describe and define unit capabilities and requirements necessary to maintain like-squadron proficiency in core skills and combat leadership. Training events are based on specific requirements and performance standards to ensure aircrew maintain a common base of training and depth of combat capabilities. Together, the T&R comprises a building block approach to ensure that trained aircrews remain ready, relevant, and fully capable of supporting the MAGTF commander.

2. HMLA Mission. Support the MAGTF Commander by providing offensive air support, utility support, armed escort and airborne supporting arms coordination, day or night under all weather conditions during expeditionary, joint or combined operations.

3. AH-1 Mission Essential Task List (METL)

- a. (UJTL TA 1.1.2) Conduct Shipboard Deck helicopter Landing Qualifications.
- b. (UJTL TA 1.1.4) Conduct Sea and Air Deployment Operations
 - Maintain the capability to deploy and operate from advanced bases, expeditionary airfields, Forward Operating Bases (FOBs), and naval shipping.
 - Perform organizational maintenance on assigned aircraft.
- c. (UJTL TA 1.2.1) Conduct Air Assault Operations and Air Assault
 - Provide armed escort for assault helicopters and tiltrotor aircraft.
- d. (UJTL TA 1.2.3) Conduct Amphibious Assault and Raid Operations
 - Provide armed escort for airborne and surface forces.
- e. (UJTL TA 3.2.1) Conduct Fire Support
 - Engage and destroy point armored targets.
 - Provide fire support for forward and rear area forces against point and area targets.
- f. (UJTL TA 3.2.2) Conduct Close Air Support
 - Conduct escort of friendly ground forces.
 - Conduct Assault Support Escort.
- g. (UJTL TA 3.2.3) Conduct Interdiction Operations
 - Conduct Armed Reconnaissance.
- h. (UJTL TA 3.2.4) Conduct Joint Suppression of Enemy Air Defenses

- i. (UJTL TA 3.2.8) Conduct Air-to-Air Operations
 - Conduct offensive anti-air warfare and defensive air operations.
 - Maintain self-defense capability from air-to-air threats.
- j. (UJTL TA 3.3) Coordinate Battlespace Maneuver and Integrate with Firepower
 - Conduct combined arms coordination and control operations.
 - Conduct multi-sensor imagery, visual reconnaissance, and provide Battle Damage Assessment.
- k. (UJTL TA 6.2) Conduct Joint Personnel Recovery
 - Conduct Tactical Recovery of Aircraft and Personnel (TRAP) operations.
- l. (UJTL TA 6.3) Conduct Rear Area Security
 - Provide security for forward and rear area forces against point and anti-armor forces.
- m. (UJTL TA 6.4) Conduct Noncombatant Evacuation
 - Provide Fire Support and escort for evacuation operations.

4. Table Of Organization. Refer to Table of Organization (T/O) 8970 managed by Total Force Structure, MCCDC, for current authorized organizational structure and personnel strength. As of this publication date, HMLA units are authorized:

HMLA Squadron

18 AH-1W, 9 UH-1N

Pilots: 44 AH-1W, 23 UH-1N, 19 Crew Chiefs, 17 Aerial Gunners/Observers

HMLA Detachment

6 AH-1W & 3 UH-1N

Pilots: 14 AH-1W, 7 UH-1N

5 Crew Chiefs, 5 Aerial Observers

5. Core Capability. A core capable HMLA unit is able to sustain the number of sorties listed below on a daily basis during contingency/combat operations. The sortie rates are based on 1.5 hour average sortie duration and assumes ≥ 70 percent FMC aircraft and ≥ 90 percent T/O aircrew on hand. If unit FMC aircraft < 70 percent or T/O aircrew < 90 percent, core capability will be degraded by a like percentage. A core capable unit is able to accomplish all tasks designated in the unit METL from a main base, expeditionary base, or amphibious platform.

a. Core Capable Squadron. A Core Capable HMLA squadron is able to sustain 30 AH-1W and 15 UH-1N sorties per 24-hour period.

b. Core Capable Squadron (-). A Core Capable squadron (-) is able to sustain 21 AH-1W and 10 UH-1N sorties per 24-hour period.

c. Core Capable Detachment. A Core Capable detachment is able to sustain 10 AH-1W and 5 UH-1N sorties per 24-hour period.

6. METL/Core Skill Matrix. AH-1W core skills directly support the METL as follows:

METL	AH-1 CORE SKILL								CORE PLUS		
	TERF	REC	SWD	ESC	OAS	ANSQ	FAC	EW	CQ	DACM	NBC
a. Conduct Shipboard Deck helicopter Landing Qualifications						X			X		X
b. Conduct Sea and Air Deployment Operations						X			X		
c. Conduct Air Assault and Air Assault Operations	X		X	X	X	X	X	X	X	X	X
d. Conduct Amphibious Assault & Raid Operations	X	X	X	X	X	X	X	X	X	X	X
e. Conduct Fire Support	X	X	X		X	X	X	X			X
f. Conduct Close Air Support	X	X	X		X	X	X	X			X
g. Conduct Interdiction Operations	X	X	X		X	X	X	X			X
h. Conduct JSEAD	X	X	X		X	X	X	X			X
i. Conduct Air-to-Air Operations	X		X	X		X		X		X	X
j. Coordinate Battlespace Man and Integrate w/Firepower	X	X	X		X	X	X				X
k. Conduct Joint Personnel Recovery	X	X	X	X	X	X	X				X
l. Conduct Rear Area Security	X	X	X	X	X	X	X	X		X	X
m. Conduct Noncombatant Evacuation	X	X	X	X	X	X	X	X			

7. AH-1W Core Model Minimum Requirements (CMMR). Squadron core competency reflects the minimum level of competency a squadron must achieve to perform its core capability. AH-1 core competency is measured in terms of minimum unit Core Skill Proficiency (CSP) and minimum numbers of flight leaders per paragraphs a. and b. below:

a. Minimum Unit CSP Requirements. As a minimum, in order to be considered Core Competent, a unit must possess the following numbers of AH-1 crews who are proficient in each core skill (Unit CSP). In order to be considered proficient in a core skill (individual CSP), an AH-1 crewmember must attain and maintain proficiency in core skill events, as delineated in paragraphs (1) and (2) below. The standard AH-1W crew consists of 2 pilots.
* NOTE: CQ, DACM, and NBC are core plus skills. Proficiency in CQ, DACM, and NBC is not required to obtain unit CSP and will not contribute to unit T-level readiness.

CORE SKILL *CORE PLUS	SQDN Pilots	SQDN Crews	SQDN(-) Pilots	SQDN(-) Crews	DETACHMENT Pilots	DETACHMENT Crews
TERF	32	16	20	10	12	6
REC	32	16	20	10	12	6
SWD	32	16	20	10	12	6
ESC	28	14	20	10	8	4
OAS	24	12	16	8	8	4
ANSQ	24	12	16	8	8	4
FAC**	8	8	6	6	2	2
EW	24	12	16	8	8	4
CQ	24	12	12	6	12	6
DACM	12	6	8	4	4	2
NBC	32	16	20	10	12	6
OAS	24	12	12	6	12	6

** A FAC capable crew requires 1 FAC(A) per aircraft

(1) Events Required to Attain Individual CSP. To initially attain CSP, an AH-1 crewmember must successfully complete all of the T&R events listed in the chart below for that core skill.

AH-1W Pilot	TERF	REC	SWD	ESC	OAS	ANSQ	FAC	EW	CQ*	OAS	DACM	NBC
T&R event requirements to attain competency	210 211	230 231	240 241 242 243 244 245	250 251 252	260 261 262 320 321 322 323 324	310 311 312 313 314 315	340 341 342 343	300 301	430 431 432 433 434 435	400 401 402 403 404 405	410 411 412 413 414 416	420

(2) Events Required to Maintain Individual CSP. To maintain CSP, an AH-1 crewmember must maintain proficiency in all of the T&R events listed in the chart below for that core skill.

AH-1W Pilot	TERF	REC	SWD	ESC	OAS	ANSQ	FAC	EW	CQ*	OAS	DACM	NBC
T&R event requirements to maintain competency	211	231	242 245	251 252	323 324	311 313 314	343	300	434	403 404	413 416	420

b. Minimum Combat Leader Requirements. As a minimum, in order to be considered Core Competent, a unit must possess the following numbers of AH-1 aircrew with the listed flight leadership designations.

Designation	Squadron Pilot	SQDN (MINUS 1 DET) PILOTS	DET PILOTS
AHC	18	12	6
SEC LDR	9	6	3
DIV LDR	6	4	2
FLT LDR*	4	3	1
AMC*	4	3	1

* Flight Lead and AMC Combat Leader requirements apply to HMLA squadron, not individual aircraft models (may be filled by UH or AH pilot).

8. Qualifications And Designations Tables. The tables below delineate T&R events required to be completed to attain initial qualifications and designations. All stage lectures, briefs, squadron training and prerequisites shall be complete prior to completing final events. Qualification and designation letters signed by the commanding officer shall be placed in individual NATOPS and APR/MPR jackets. Loss of proficiency in all qualification events of a core skill causes the associated qualification to be lost. Regaining a qualification requires completing all R coded syllabus events associated with that qualification.

Qualification	Initial Event Qualification Requirements
NATOPS (RQRD-601)	Per OPNAV 3710.7 and an annual designation letter signed by the commanding officer
INSTRUMENT (RQRD-600)	Per OPNAV 3710.7 and an annual designation letter signed by the commanding officer
FAM (RQRD-602)	Semi-Annual EP simulator.
TERF (QUAL-610)	210, 211
NSQ HLL (QUAL-611)	211, 231, 244, 245, 251, 262
NSQ LLL (QUAL-612)	310, 311, 312, 313, 314, 315
CQ (QUAL-615)	430, 431, 432, 433, 434
NVG CQ (QUAL 616)	331
UNAIDED CQ (QUAL 617)	430
RW DACM (QUAL-618)	410, 411, 412, 413
FW DACM (QUAL-619)	414, 416
FAC (A) (QUAL-624)	340, 341, 342, 343

Designation	Designation Requirements
PQM (DESG-630)	Successful completion of NATOPS and Instrument checks.
AHC (DESG-631)	Successful completion of the Core Skill Basic phase and the EW, ANSQ, and OAS stages of the Core Skill Advanced Phase through OAS-324.
FCP (DESG-632)	Upon completion of the DESG-632 evaluation flight, the commanding officer may designate the PUI a Functional Check Pilot.
SECTION LEAD (DESG-649)	640, 641, 649E. PUI will fly any of the previously flown Core Skill Basic or Core Skill Advanced sorties in conjunction with the 649 tracking code.
DIVISION LEAD (DESG-659)	650, 651, 659E. The PUI will fly any of the previously flown Core Skill Basic or Core Skill Advanced sorties in conjunction with the 659 tracking code.
FLIGHT LEAD (DESG-669)	The PUI will fly any of the previously flown sorties in conjunction with the 669 tracking code.
AMC (DESG-679)	Upon completion of the DESG-679 evaluation flight, the commanding officer may designate the PUI an Air Mission Commander (AMC).
BIP (IDSG-680)	500, 501, 502, 503, 504
TERFI (IDSG-681)	510, 511
WTO (IDSG-682)	520, 521, 522, 523
FAC (A) I (IDSG-683)	IAW the MAWTS-1 Course Catalog
DACMI (IDSG-688)	
NSFI (IDSG-694)	
NSI (IDSG-696)	
WTI (IDSG-699)	
SPECIFIC OPERATIONS TRACKING CODES	Tracking Code Requirements In addition to the above RQRD, DESG, and IDSG codes, the following tracking codes are entered by Operations.
SOTC-710	Live TOW Shoot
SOTC-711	Live Hellfire Shoot
SOTC-712	Live Sidewinder Shoot

a. Instructor Requirements. A squadron should possess the following numbers of pilots with the listed instructor designations IAW the AH-1W T&R and MCO 3500.12C (WTPP). The listed numbers are based on squadron core capability definition.

INSTRUCTOR DESIGNATION	Squadron Pilot	SQDN (MINUS 1 DET) PILOTS	DET PILOTS
BIP	10	7	3
TERFI	10	7	3
WTO	10	7	3
NSI	7	5	2
WTI	3	2	1
FAC(A) I	4	3	1
DACM(I)	3	2	1

b. Currency. A control measure used to provide an additional margin of safety based on exposure frequency to a particular skill. It is a measure of time since the last event demanding that specific skill. Loss of currency does not affect a loss of Combat Readiness Percentage (CRP). For example, currency determines minimum altitudes in rules of conduct based upon the most recent low altitude fly date. Specific currency requirements for individual type mission profiles may be found in the T&R Program Manual.

c. Proficiency. Proficiency is a measure of achievement of a specific skill. Refly factors establish the maximum time between demonstration of those particular skills. CRP is a measurement of "demonstrated proficiency." If an aircrew exceeds the refly factor for a particular event, the individual loses CRP for that particular event. To regain proficiency, an individual shall complete the delinquent event with a proficient crewman/flight lead. If an entire unit loses proficiency, unit instructors shall regain proficiency by completing an event with instructors from a like unit. If not feasible, the instructor shall regain proficiency by completing the event with another instructor. If a unit has only one instructor and cannot complete the event with an instructor from another unit, he shall regain proficiency with another aircraft commander or as designated by his commanding officer.

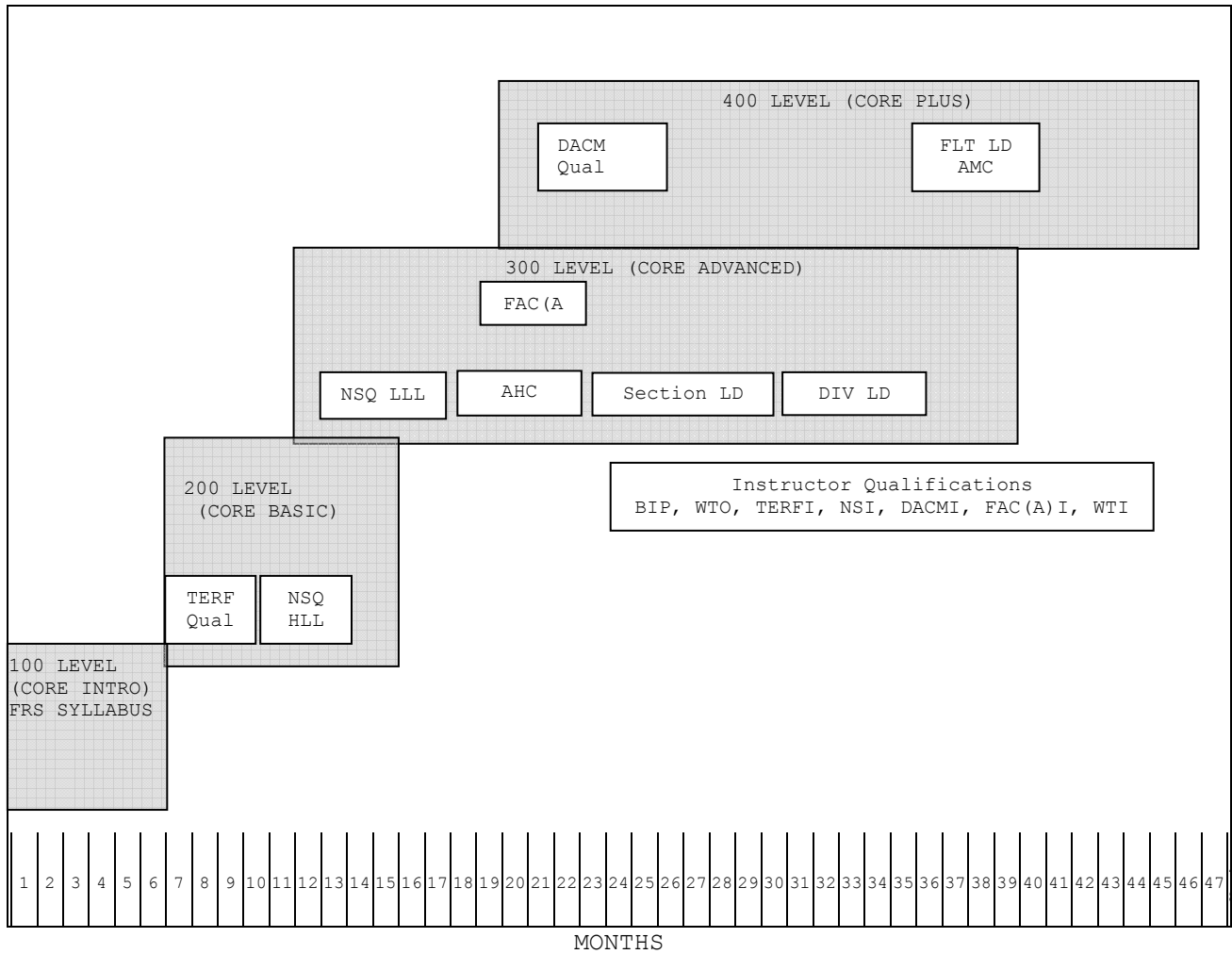


Figure 1.--AH-1W Pilot Notional Training Progression Model.

101. PROGRAMS OF INSTRUCTION (POI) FOR BASIC AND TRANSITION PILOT

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-2	Interactive Courseware	Training Squadron
3-22	Core Introduction Training	Training Squadron
23-42	Core Basic/Advanced	
	AH-1W Weapons Delivery Training	Tactical Squadron
43-52	Core Plus Training	Tactical Squadron

102. POI FOR CONVERSION PILOT

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-2	Interactive Courseware	Training Squadron
3-16	Core Introduction Training	Training Squadron
17-25	Core Basic Training	Tactical Squadron
26-36	Core Skill Advanced Training	
	AH-1W Weapons Delivery	Tactical Squadron
37-47	Core Plus Training	Tactical Squadron

103. POI FOR REFRESHER PILOT

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-2	Interactive Courseware	Training Squadron
3-8	Core Introduction Training	Training Squadron
9-16	Core Basic Training	Tactical Squadron
17-24	Core Skill Advanced Training/AH-1W	
	Weapons Delivery Refresher	Tactical Squadron
25-30	Core Plus Training	Tactical Squadron

104. POI FOR MODIFIED REFRESHER PILOT

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-2	Interactive Courseware	Training Squadron
3-8	Core Introduction	
	Training	Training Squadron
*	Core Basic/Advanced	Tactical Squadron
*	Training/	
	AH-1W Weapons Delivery Refresher	Tactical Squadron
*	Core Plus	
	Training	Tactical Squadron

* = Modified Refresher stages are based upon the full Refresher syllabus modified at the discretion of the squadron commanding officer.

105. POI FOR FRS INSTRUCTOR PILOT

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-4	Instructor Pilot Flight Training	Training Squadron

110. GROUND/ACADEMIC TRAINING

1. Ground training requirements are listed separately for each phase of flight training. Training may be completed earlier in stage but should be completed by the appropriate sortie(s). Course descriptions are as follows:

a. Interactive Courseware (ICW). This is a Computer Based Training (CBT) syllabus for Combat Capable training. It consists of both self-paced lesson and instructor-presented phase lectures.

b. Academic Support Package (ASP). These are MAWTS-1 prepared classes available on CD-ROM. All material is contained on CDs, both classified

(ASP-C) and unclassified (ASP-U). These may be either self-paced lessons or instructor-presented lectures. The classes listed are only the Generic, Common or Specific AH-1W classes. Other ASP classes may be useful as well.

c. Computer Based Training (CBT). These are software and/or hardware computer training aids designed to augment training for specific systems. Examples include the Naval Air Warfare Center programs for TOW, THCDP, and CDU, as well as other programs developed by various sources such as the CDU Device Trainer, TISP, FTS, PFPS/JMPS, EOTDA, and ALE-39 trainers/programs.

d. Squadron Developed Training. Squadron developed curriculum is used to enhance the above programs. Recognition training will be continuous.

120. FLIGHT/SIMULATOR/EVENT TRAINING FOR BASIC AND TRANSITION PILOT

1. Core Introduction Phase

STAGE	NO. EVENTS ACFT/SIM	NO. HOURS ACFT/SIM	CRP ACFT/SIM
Basic Qualification (Flight school)	--/--	--/--	25.0/--
Familiarization	14/5	28.0/7.5	11.6/3.8
Instruments	2/3	4.0/4.5	1.4/2.4
Formation	4/0	8.0/0.0	3.2/0.0
Terrain Flight	3/0	6.0/0.0	2.6/0.0
Navigation	3/0	6.0/0.0	2.4/0.0
Specific Weapons Delivery	3/3	6.0/4.5	2.2/2.6
Tactics	1/0	2.0/0.0	1.0/0.0
Core Introduction Check	1/1	2.0/1.5	1.0/0.8
TOTAL FOR PHASE	31/12	62.0/18.0	50.4/9.6
COMBINED TOTALS	43	80.0	60.0
ACCUMULATION FOR BASIC POI	43	80.0	60.0

2. Core Basic Phase

STAGE	NO. EVENTS ACFT/SIM	NO. HOURS ACFT/SIM	CRP ACFT/SIM
Terrain Flight/Navigation	2/0	4.0/0.0	2.0/0.0
Reconnaissance	2/0	4.0/0.0	2.0/0.0
Specific Weapons Delivery	4/2	8.0/3.0	3.7/2.0
Escort	3/0	6.0/0.0	2.3/0.0
Offensive Air Support	2/1	4.0/1.5	2.0/1.0
TOTAL FOR PHASE	13/3	26.0/4.5	12.0/3.0
COMBINED TOTALS	16	30.5	15.0
ACCUMULATION FOR BASIC POI	59	110.5	75.0

3. Core Advanced Phase

STAGE	NO. EVENTS ACFT/SIM	NO. HOURS ACFT/SIM	CRP ACFT/SIM
Electronic Warfare	1/1	2.0/1.5	1.0/1.0
Advanced Night System Qualification	4/2	8.0/3.0	4.75/2.0
Offensive Air Support	5/0	10.0/0.0	7.0/0.0
Forward Air Controller	4/0	8.0/0.0	4.25/0.0
TOTAL FOR PHASE	14/3	28.0/4.5	17.0/3.0
COMBINED TOTALS	17	32.5	20.0
ACCUMULATION FOR BASIC POI	76	143.0	95.0

4. Core Plus Phase

<u>STAGE</u>	<u>NO. EVENTS</u> <u>ACFT/SIM</u>	<u>NO. HOURS</u> <u>ACFT/SIM</u>	<u>CRP</u> <u>ACFT/SIM</u>
Offensive Air Support	6/0	12.0/0.0	3.0/0.0
Defensive Air Combat Maneuvering	6/0	12.0/0.0	1.3/0.0
NBC	1/0	1.0/0.0	.1/
Field Carrier Landing Practice	2/1	2.0/1.5	.2/.1
Carrier Qualification	3/0	3.0/0.0	0.3/0.0
TOTAL FOR PHASE	18/1	30.0/1.5	4.8/0.2
COMBINED TOTALS	19	31.5	5.0
TOTALS FOR BASIC POI	95	174.5	100.0

121. FLIGHT/SIMULATOR/EVENT TRAINING FOR CONVERSION PILOT

1. Core Introduction Phase

<u>STAGE</u>	<u>NO. EVENTS</u> <u>ACFT/SIM</u>	<u>NO. HOURS</u> <u>ACFT/SIM</u>
Familiarization	12/4	24.0/6.0
Instruments	2/3	4.0/4.5
Formation	3/0	6.0/0.0
Terrain Flight	3/0	6.0/0.0
Navigation	2/0	4.0/0.0
Specific Weapons Delivery	3/3	6.0/4.5
Tactics	1/0	2.0/0.0
Core Introduction Check	1/1	2.0/1.5
TOTAL FOR PHASE	27/11	54.0/16.5
COMBINED TOTALS	38	70.5
ACCUMULATION FOR CONVERSION POI	38	70.5

2. Core Basic Phase

<u>STAGE</u>	<u>NO. EVENTS</u> <u>ACFT/SIM</u>	<u>NO. HOURS</u> <u>ACFT/SIM</u>
Terrain Flight/Navigation	1/0	2.0/0.0
Reconnaissance	2/0	4.0/0.0
Specific Weapons Delivery	4/2	8.0/3.0
Escort	3/0	6.0/0.0
Offensive Air Support	2/1	4.0/1.5
TOTAL FOR PHASE	12/3	24.0/4.5
COMBINED TOTALS	15	28.5
ACCUMULATION FOR CONVERSION POI	53	99.0

3. Core Advanced Phase

<u>STAGE</u>	<u>NO. EVENTS</u> <u>ACFT/SIM</u>	<u>NO. HOURS</u> <u>ACFT/SIM</u>
Electronic Warfare	1/1	2.0/1.5
Advanced Night System Qualification	4/2	8.0/3.0
Offensive Air Support	5/0	10.0/0.0
Forward Air Controller	4/0	8.0/0.0
TOTAL FOR PHASE	14/3	28.0/4.5
COMBINED TOTALS	17	32.5
ACCUMULATION FOR CONVERSION POI	70	131.5

4. Core Plus Phase

<u>STAGE</u>	NO. EVENTS	NO. HOURS
	<u>ACFT/SIM</u>	<u>ACFT/SIM</u>
Offensive Air Support	6/0	12.0/0.0
Defensive Air Combat Maneuvering	6/0	12.0/0.0
NBC	1/0	1.0/0.0
Field Carrier Landing Qualification	2/1	2.0/1.5
Carrier Qualification	3/0	3.0/0.0
TOTAL FOR PHASE	18/1	30.0/1.5
COMBINED TOTALS	19	31.5
TOTALS FOR CONVERSION POI	89	163.0

122. FLIGHT/SIMULATOR/EVENT TRAINING FOR REFRESHER PILOT

1. Core Introduction Phase

<u>STAGE</u>	NO. EVENTS	NO. HOURS
	<u>ACFT/SIM</u>	<u>ACFT/SIM</u>
Familiarization	6/1	12.0/1.5
Instruments	2/2	4.0/3.0
Formation	2/0	4.0/0.0
Terrain Flight	2/0	4.0/0.0
Navigation	1/0	1.5/0.0
Specific Weapons Delivery	0/3	0.0/4.5
Core Introduction Check	1/1	2.0/1.5
TOTAL FOR PHASE	14/7	27.5/10.5
COMBINED TOTALS	21	38.0
ACCUMULATION FOR REFRESHER POI	21	38.0

2. Core Basic Phase

<u>STAGE</u>	NO. EVENTS	NO. HOURS
	<u>ACFT/SIM</u>	<u>ACFT/SIM</u>
Carrier Qualification	2/0	2.0/0.0
Terrain Flight/Navigation	1/0	2.0/0.0
Specific Weapons Delivery	1/1	2.0/3.0
Offensive Air Support	1/0	2.0/0.0
TOTAL FOR PHASE	5/1	8.0/3.0
COMBINED TOTALS	6	11.0
ACCUMULATION FOR REFRESHER POI	27	49.0

3. Core Advanced Phase

<u>STAGE</u>	NO. EVENTS	NO. HOURS
	<u>ACFT/SIM</u>	<u>ACFT/SIM</u>
Electronic Warfare	0/1	0.0/1.5
Advanced Night System Qualification	3/0	6.0/0.0
Offensive Air Support	2/0	4.0/0.0
Forward Air Controller	4/0	8.0/0.0
TOTAL FOR PHASE	9/1	18.0/1.5
COMBINED TOTALS	10	19.5
ACCUMULATION FOR REFRESHER POI	37	68.5

4. Core Plus Phase

<u>STAGE</u>	NO. EVENTS	NO. HOURS
	<u>ACFT/SIM</u>	<u>ACFT/SIM</u>
Offensive Air Support	4/0	8.0/0.0
Defensive Air Combat Maneuvering	3/0	6.0/0.0
NBC	1/0	1.0/0.0
Carrier Qualification	3/0	3.0/0.0
TOTAL FOR PHASE	11/0	18.0/0.0
COMBINED TOTALS	11	18.0
TOTAL FOR REFRESHER POI	48	86.5

123. FLIGHT/SIMULATOR/EVENT TRAINING FOR MODIFIED REFRESHER PILOT

1. Core Introduction Phase

STAGE	NO. EVENTS	NO. HOURS
	ACFT/SIM	ACFT/SIM
Familiarization	4/0	8.0/0.0
Instrument	2/2	4.0/3.0
Formation	1/0	2.0/0.0
Terrain Flight	2/0	4.0/0.0
Specific Weapons Delivery	0/1	0.0/1.5
Core Introduction Check	1/1	2.0/1.5
TOTAL FOR PHASE	10/4	20.0/6.0
COMBINED TOTALS	14	26.0
TOTAL FOR MODIFIED REFRESHER POI	14	26.0

Note: The remaining Modified Refresher stages are based upon the full Refresher syllabus modified at the discretion of the squadron commanding officer.

124. FLIGHT/SIMULATOR/EVENT TRAINING FOR INSTRUCTOR TRAINING

STAGE	NO. EVENTS	NO. HOURS
	ACFT/SIM	ACFT/SIM
Basic Instructor Pilot	4/1	8.0/1.5
Terrain Flight Instructor	2/0	4.0/0.0
Weapons Training Officer	2/2	4.0/3.0
TOTAL FOR PHASE	8/3	16.0/4.5
COMBINED TOTALS	11	20.5
TOTAL FOR IUT POI	11	20.5

125. GRADUATE LEVEL COURSES. There are 5 graduate level courses (DACMI, FAC(A)I, NSFI, NSI, WTI) that qualify instructors for specific portions of the T&R syllabus. The requirements for these instructor certifications are contained in the MAWTS-1 Course Catalog.

130. GROUND/FLIGHT/SIMULATOR EVENT PERFORMANCE REQUIREMENTS

1. General

a. This Manual generalizes mission guidance to allow for local conditions and to allow this Manual to remain unclassified. DC AVN and CG MCCDC encourage squadrons to use the full range of tactics in the Tactical Manuals and to adopt the latest developed and proven tactics.

b. Compliance with the written flight description is mandatory for syllabus event completion. Unless specified, simulator events may be conducted in either the Weapons Systems Trainer (WST) or Aircrew Procedures Trainer (APT). Per T&R Program Manual, events may be listed as Aircraft preferred/Simulator optional - A/S, Simulator preferred/Aircraft optional - S/A, Aircraft only - A, or Simulator only - S. In the absence of a flight simulator, completion of a syllabus event is not required to complete that stage. Completion of those events shall be accomplished as soon as practicable upon simulator availability. Should the command desire, simulator events may be flown as actual sortie events for T&R credit. CRM will be stressed and evaluated throughout each stage.

c. All flights shall terminate with a comprehensive debrief with emphasis on aircrew performance using all evaluation techniques available.

d. Initial syllabus events not annotated with an N or NS shall be conducted during daylight hours. Pilots shall fly events annotated with an

N (Night) or NS (Night Systems) at least 30 minutes after official sunset. Pilots may fly events annotated with (NS) at night with NVDs or by day.

e. To the greatest extent possible, an annual E.P. review (RQRD-602) will be conducted in the same month as the annual NATOPS check (RQRD-601). In lieu of an AH-1W simulator, the RQRD-602 may be conducted verbally by a qualified instructor pilot with the training pilot in the aircraft cockpit.

2. Squadron Syllabus Assignment

a. Basic and Transition Syllabus. Basic and Transition pilots will be assigned to fly the entire syllabus. Conversion, Refresher, and Modified Refresher will fly the sorties designated by a C, R and M respectively in the event description.

b. Refresher Syllabus. A Refresher syllabus is provided for personnel who have not flown their type aircraft for over 730 days. The Refresher syllabus is predicated on the experience of the Refresher pilot. A pilot in the Refresher syllabus should fly all R coded events. However, a Refresher pilot need not fly every event within a stage of training to be requalified in that stage. The commanding officer may tailor the Refresher syllabus to fit the experience of the Refresher pilot per T&R Program Manual. When the R coded events within a stage of training are complete, the pilot shall be credited with the CRP for the entire stage of training. This assumes that the Refresher has had previous proficiency in that stage of training. If the Refresher pilot has no previous proficiency in a stage or particular event, then the Refresher should fly the entire stage or all events not previously flown. The Refresher syllabus applies only up to the stage achieved during the prior tour. After that the pilot will complete the entire remaining syllabus. Prerequisites apply only to replacement aircrew and not to Refresher pilots.

c. Modified Refresher Syllabus. A Modified Refresher syllabus is provided for personnel who have not flown their type aircraft for 486-730 days. Following the FRS, the Refresher shall be assigned to the tactical squadron Refresher syllabus described; however, the commanding officer may tailor the Refresher syllabus to fit the experience of the Refresher pilot per T&R Program Manual.

3. Aircrew Evaluation Flights. All pilots shall have an appropriate NATOPS evaluation form completed annually upon completion of the following:

a. NATOPS Check (CCX-181, RQRD-601). A designated NATOPS Instructor/Assistant NATOPS Instructor shall evaluate RQRD-601.

b. Instrument Check (RQRD-600). A designated Instrument Instructor who is a member of the Instrument Flight Board shall evaluate RQRD-600.

4. Aircrew Training Forms (ATF)

a. An ATF is required for any initial event completed by a Basic, Transition, Conversion or Refresher pilot, or as recommended by the squadron Standardization Board.

b. If the commanding officer has waived/deferred a syllabus sortie, the squadron training officer shall place a waiver/deferral letter in section 3 of the APR.

c. MAWTS-1 will maintain an ATF database that establishes minimum requirements for each syllabus event. Access for individual units will be possible at the MAWTS-1 website.

5. Instructor Requirements

a. The minimum instructor requirements are listed in the crew requirements section of each event.

b. For simulator events, the requirement for a squadron Instructor Pilot (IP) in addition to the Certified Simulator Instructor is at the discretion of the squadron. When practical, a copilot should be scheduled with the PUI for Crew Resource Management (CRM) proficiency.

c. To instruct any sortie the minimum requirements are Basic IP and "complete" in that stage.

6. Event Completion. Compliance with the written event description is mandatory for syllabus event completion. Times indicated for each event are only recommendations.

7. Sequence. Training should be accomplished by flying events within a stage in sequence and stages in sequence when practical.

8. Definitions

a. Discuss

(1) The IP shall discuss a procedure or maneuver during the brief, inflight, or debrief.

(2) The PUI is responsible for knowledge of the applicable procedures prior to the briefing.

b. Demonstrate

(1) The IP performs the maneuver with accompanying description.

(2) The PUI observes the maneuver and is responsible for the knowledge of the procedures prior to the sortie.

c. Introduce

(1) At his option, the IP may perform the maneuver with an accompanying description, or he may coach the PUI through the maneuver without demonstration.

(2) The PUI shall perform the maneuver with coaching as necessary and is responsible for knowledge of the procedures prior to the sortie.

d. Review

(1) The IP observes and grades the maneuver without coaching the PUI. An airborne critique of PUI performance is at the option of the instructor.

(2) The PUI is expected to perform the maneuver without coaching and devoid of procedural error at a level acceptable to warrant progress into the next stage of training.

131. CORE SKILL INTRODUCTION PHASE

1. Purpose. To develop a core skill introduction complete copilot. At the completion of this phase the PUI will be designated Pilot Qualified in Model (PQM), NATOPS qualified and rates the 7565 MOS as specified in CSIX-181.

2. General. Completion of this phase meets the requirements for the PUI to be designated a PQM. At the discretion of the squadron commanding officer a letter designating the PUI as PQM shall be placed in the NATOPS jacket and APR and a Tracking Code of RQRD-601 shall be logged. The PUI will gain proficiency in FAM, INST, FORM, TERF, NAV, SWD, and TAC. NVDs will be utilized during the FAM, FORM, TERF, and NAV stages.

3. Familiarization (FAM)

a. Purpose. To develop familiarity with aircraft flight characteristics, limitations, and emergency procedures during day and night operations. To develop proficiency in all maneuvers and to instill basic CRM procedures throughout the familiarization stage.

b. General. PUI must demonstrate proficiency with all shore based FAM procedures to include normal/emergency procedures and basic aircraft maneuvers. Additionally, the PUI must display a thorough knowledge of limitations and flight characteristics. During all stages, the PUI shall complete a weight and balance form before each sortie and present it to the IP for verification.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. Interactive Courseware, preflight and postflight, flight procedures, maneuver descriptions, emergency procedures, course rules, familiarization stage lecture, open and closed-book NATOPS exams.

FAM-00

C,R,M 1 AH-1W STATIC

Goal. Familiarize the PUI with preflight, cockpit interior inspection, postflight inspection, weight and balance computations and emergency egress procedures.

Requirement

(1) Discuss maintenance department organization and the ADB.

(2) Demonstrate preflight, cockpit interior inspection, postflight inspection, weight and balance computations and emergency egress procedures. Apply ground power to the aircraft to demonstrate the setup of the EGI and NTS systems.

Performance Standards. N/A.

Prerequisites. N/A.

Ordinance. N/A.

External Syllabus Support. Ground power.

Crew. BIP/PUI.

FAM-000

C 1 AH-1W STATIC

Goal. PUI will demonstrate the preflight, interior cockpit inspection, postflight, weight and balance and emergency egress.

Requirement

(1) Discuss CRM.

(2) Introduce blind cockpit checks, preflight, interior inspection, postflight inspection, weight and balance computations and emergency egress procedures.

Performance Standards. Without input from the IP, PUI completes an accurate weight and balance computation, screens and understands the function of the ADB, and conducts an aircraft preflight and postflight in accordance with AH-1W NATOPS and MDG. Apply ground power to the aircraft to introduce the setup of the EGI and NTS systems.

Prerequisite. ICW complete.

Ordinance. N/A.

External Syllabus Support. Ground power.

Crew. BIP/PUI.

e. Flight and Simulator Event Training. (14 Sorties, 28.0 hours/5 Simulator Periods, 7.5 Hours).

SFAM-100 1.5 C WST/APT S

Goal. RS - Familiarization with NATOPS checklists, procedures and APT introduction.

Requirement

Demonstrate NATOPS checklists and procedures including pre-entry inspection of FS and RS for day and night operations, prestart checklist, normal start, subsequent start, cocking and quick start checklist, rotor brake start, post start checklist, pre-takeoff checklist, pre-landing checklist, shutdown checklist, instrument flight checklist, engine wash and shutdown procedures, and hot fueling checklist. In lieu of an APT this event may be conducted in the WST or on a static aircraft. Demonstrate the capabilities, limitations and operation of the APT.

Performance Standards. PUI will demonstrate familiarity with checklists, start procedures and emergency procedures per the AH-1W NATOPS and MDG.

Prerequisites. FAM-000.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. CSI/PUI.

SFAM-101 1.5 C WST S

Goal. FS - Cobra Weapons System Trainer (WST) introduction.

Requirement

(1) Discuss emergency shutdown, lost plane procedures, landing in trees, ditching (power on/off), autorotational characteristics, wave-off procedures, fire detection/extinguisher system, hot start, EECU lockout and engine fire on start.

(2) Demonstrate start/shutdown procedures, starting emergencies, autorotational characteristics at altitude, full and power recovery autos, maximum gross weight (no hover) landings, High Altitude Emergencies (HAE), quick stops, sliding landings, hovering autorotations, EECU lockout, underspeed, 20 and 30 degree dives and single engine flight at altitude.

(3) Demonstrate/introduce normal takeoff, normal approach and steep approaches.

(4) Review basic NTS/EGI/CDU switchology.

Performance Standards. IAW the AH-1W NATOPS and MDG.

Prerequisites. SFAM-100.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. CSI/PUI.

FAM-102

2.0 C 1 AH-1W A

Goal. FS - Cobra introduction.

Requirement

(1) Discuss engine chip caution light, engine oil pressure low/oil bypass filter, engine oil over-temp, dual engine failure, engine limitations, engine oil systems, aircraft weight and balance, standard hand and arm signals, hot refueling procedures and HAE.

(2) Demonstrate starting procedures, course rule/area FAM to include entry points, lost comm procedures and local no-fly areas, autorotational characteristics at altitude, shutdown procedures and postflight.

(3) Demonstrate/introduce normal takeoffs, normal and steep approaches and low work.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. SFAM-101.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP/PUI.

FAM-103

2.0 C,R,M 1 AH-1W A

Goal. FS - Review previous work.

Requirement

- (1) Discuss rotor brake pressurized in flight, mast bumping, dual engine failure, airspeed limitations, rotor system, Nr limitations, single engine failure, and RPM warning system.
- (2) Demonstrate quick stop, sliding landings, hovering and taxiing autorotations, 20 and 30 degree dives, single engine failure at altitude and single engine approaches and landings.
- (3) Demonstrate/introduce maximum gross weight (no hover) landings, straight-in, 90 and 180 degree autorotations and HAE.
- (4) Review low work, normal takeoff, normal and steep approach.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. FAM-102.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP/PUI.

SFAM-104

1.5 C WST/APT S

Goal. RS - Introduction to rear seat and emergency procedures.

Requirement

- (1) Discuss Np overspeed, Np underspeed, compressor stall, dual engine fire, single engine fire, battery system failure, MGT limitations, starter limitations, starting emergencies and engine start system.
- (2) Introduce starting procedures and starting emergencies, power recovery, single engine failures, under-speed, EECU lockout and full autorotations.
- (3) Review low work, basic air work, normal takeoffs, normal and steep approaches, no hover landings and HAE.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. FAM-103.

Ordinance. None.

External Syllabus Support. N/A.

Crew. CSI/PUI.

FAM-105 2.0 C 1 AH-1W A

Goal. RS - Rear seat introduction.

Requirement

(1) Discuss electrical fire, fuselage fire, inverter failure, generator failure, complete electrical failure, electrical system, slope landing, engine wash procedures and dynamic rollover.

(2) Demonstrate/introduce EECU lockout.

(3) Introduce starting procedures, quick stops, straight-in, 90, and 180 degree autos.

(4) Review low work, basic air work, normal takeoffs, normal and steep approaches, HAE and max gross weight (no hover) landings. PUI will complete a minimum of 5 autorotations.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. FAM-104.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP/PUI.

FAM-106 2.0 1 AH-1W A

Goal. RS - Review previous work.

Requirement

(1) Discuss use of performance charts, hydraulic system (include utility hydraulic system), hydraulic system malfunctions (including simulated emergencies), high speed/low level autos, confined area takeoffs/landings, max power takeoffs, engine alternator failure and the EECU.

(2) Demonstrate use of power charts, maximum power takeoffs, no hover takeoffs, slope landings, confined area takeoffs/landings, hydraulic system malfunctions and high speed/low level autos.

(3) Introduce single engine flight at altitude and single engine approaches and landings.

(4) Review normal approach, steep approach, quickstops, no hover landing, straight-in, 90 and 180 degree autorotations, EECU lockout and HAE. PUI will complete a minimum of 5 autorotations.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. FAM-105.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP/PUI.

FAM-107

2.0 C 1 AH-1W A

Goal. RS - Review all previous maneuvers with emphasis on problem areas.

Requirement

- (1) Discuss main drive shaft failure, c-box malfunctions, transmission malfunctions, tail rotor malfunctions (including simulated emergency procedures), c-box/transmission system, c-box/transmission oil limitations, flat pitch torque, 20 and 30 degree dives and engine/transmission torque limitations.
- (2) Demonstrate tail rotor malfunctions and SCAS off flight.
- (3) Demonstrate/introduce 20 and 30 degree dives using the HUD.
- (4) Introduce high speed/low level autos, maximum power takeoffs, slope landings, confined area takeoffs/landings (emphasize use of power charts), no hover takeoffs, single engine approaches, landings and hydraulic system malfunctions.
- (5) Review normal approach, steep approach, no hover landing, straight-in, 90, and 180 autorotations, EECU lockout, HAE, quickstops and single engine approaches. PUI will complete a minimum of 5 autorotations.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. FAM-106.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP/PUI.

FAM-108

2.0 C 1 AH-1W A

Goal. RS - Review previous work.

Requirement

- (1) Discuss SCAS failure, 42/90 chip detector, 42/90 gearbox oil pressure/over-temp, autos to a spot, the flight control system and SCAS system.
- (2) Demonstrate autos to a spot, hovering and taxiing autorotations.
- (3) Introduce tail rotor malfunctions, SCAS off flight, sliding landings and single engine approaches to a spot.
- (4) Review normal approach, steep approach, quick stop, max power takeoff, no hover takeoff, no hover landing,

straight-in, 90, and 180 autorotations, EECU lockout, HAE, confined area takeoff/landings, slope landing, hydraulic system malfunctions, 20 and 30 degree dives and single engine approaches. PUI will complete a minimum of 5 autorotations.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. FAM-107.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP/PUI.

FAM-109

2.0 C,R,M 1 AH-1W A

Goal. RS - Review previous work.

Requirement. Conduct PUI jacket review and ensure all ATFs are in the PUI APR. Emphasize problem areas in the brief and flight.

(1) Discuss fuel cell boost pump failure, engine suction pump failure, engine fuel filter bypass, fuel system (including HMU), height velocity diagram and the collective anticipator.

(2) Introduce autorotations to a spot, hovering and taxiing autorotations and the NATOPS brief.

(3) Review normal approach, steep approach, no hover landing, sliding landings, quick stop, max power takeoff, no hover takeoff, straight-in, 90, 180 and high speed/low level autorotations, autos to a spot, EECU lockout, HAE, confined area takeoff/landings, slope landing, hydraulic system malfunctions, single engine approaches, tail rotor malfunctions, SCAS off flight and 20 and 30 degree dives. PUI will complete a minimum of 5 autorotations.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. FAM-108.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP/PUI.

FAM-110

2.0 C,R,M 1 AH-1W A/S (N/NS)

Goal. FS - Introduce the PUI to the terminology, procedures and operation of the NTS, EGI and ARC-210.

Requirement

(1) Discuss NTS, EGI and ARC-210 capabilities, to include SINCARS, HAVEQUICK, startup, initializing, Datum entry, alignment modes, waypoint entry, route building procedures,

flight planning, NTS boresight, interlocks and modes of operation.

(2) Demonstrate/introduce operation of the EGI, NTS, and ARC-210, to include startup, initializing, NTS boresight, Datum entry, alignment modes, waypoint entry, route building procedures, flight planning, NTS interlocks and HAVEQUICK/SINGARS operations.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. FAM-109.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP/PUI.

SFAM-111

1.5 C,R WST/APT S N

Goal. FS - Introduce unaided night familiarization in the simulator.

Requirement

(1) Discuss electrical malfunctions, single/dual engine failures, and aircraft lighting.

(2) First half of this sortie will be a day/night EP review. Second half will introduce, at a lighted airfield, night home field pattern familiarization, normal and steep approach, sliding takeoff and landing, no hover takeoff and landing, maximum power takeoff, EECU lockout, SCAS off flight and landing, autorotations and simulated single/dual engine failures.

Performance Standards. Per AH-1W NATOPS and MDG.

Prerequisite. FAM-109.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. CSI/PUI.

FAM-112

2.0 1 AH-1W A N

Goal. FS - Unaided night introduction.

Requirement

(1) Discuss proper lighting configurations, crew coordination at night to include emergency procedures, night FAM maneuvers, RPM warning system, comfort level, required equipment for night flight, night adaptation, hand and arm signals at night and crew day/crew rest requirements.

(2) Demonstrate aircraft lighting.

(3) Introduce night basic airwork, low work, landings with the aircraft lighting system, autos (except hovering/taxiing autos), autos to a spot, no hover landings, quick stop, steep approach and single engine approach/landing. PUI will complete a minimum of 5 autorotations.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. SFAM-111.

Ordinance. N/A.

External Syllabus Support. Lit airfield.

Crew. BIP/PUI.

FAM-113

2.0 C,R,M 1 AH-1W A N

Goal. RS - Introduction to unlit field operations.

Requirement

(1) Discuss inadvertent IMC, complete electrical failure at night, single instrument indications and use of radar altimeter.

(2) Introduce landings to an unlit area of an approved airfield or improved landing site and autos to an unlit area of an approved airfield.

(3) Review *single engine approach/landing, *tail rotor malfunctions, *EECU lockout, *90, *180, *high speed/low level and *autos to a spot, low work, no hover landings, quick stop and steep approach (* maneuvers to a lighted airfield). PUI will complete a minimum of 5 autorotations.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. FAM-112.

Ordinance. N/A.

External Syllabus Support. Unlit and lighted airfield.

Crew. BIP/PUI.

SFAM-114

1.5 WST/APT S NS

Goal. FS - Introduce NVD techniques during HLL.

Requirement

(1) Discuss NVD emergencies, ANVIS-6/9, autorotations using NVDs, effects of light level on NVD performance, shadowing and NVD operation/procedures.

(2) Demo shadowing, varied LUX levels and NVD inadvertent IMC. Perform area navigation under varied weather and LUX levels.

(3) Introduce NVD low work, pattern work, steep approach, no hover landing, sliding landing, hovering and taxiing autorotations, single engine landing, straight-in, 90, 180 autorotations, NVD emergencies, NVD flight and navigation. PUI will complete a minimum of 5 autorotations.

Performance Standards. Per the AH-1W NATOPS, MDG and MAWTS-1 NVD Manual.

Prerequisites. FAM-109, NITE LAB.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. CSI/PUI.

FAM-115

2.0 C 1 AH-1W A NS

Goal. FS - Introduce NVD techniques during HLL.

Requirement. Use NVDs at an unlit outlying airfield.

(1) Discuss any electrical system malfunction, cyclic control interference, collective interference, NVD pattern work and NVD techniques.

(2) Demonstrate the NVD brief and aircraft lighting schemes.

(3) Introduce the wear and use of NVDs, low work, normal takeoff and approach, steep approach and hover takeoffs/landings. PUI will complete a minimum of 5 autorotations.

Performance Standards. Per the AH-1W NATOPS, MDG and MAWTS-1 NVD Manual.

Prerequisites. SFAM-114.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. NSFPI/PUI.

FAM-116

2.0 C,R,M 1 AH-1W A NS

Goal. RS - Introduce RS NVD familiarization and emergency procedures maneuvers during HLL.

Requirement

(1) Discuss emergency procedures while wearing NVDs and NVD comfort level.

(2) Demonstrate, introduce, and review the following familiarization maneuvers with NVDs at an approved landing site: low work, normal takeoffs, no hover takeoffs, normal approaches, steep approaches, maximum gross weight (no hover) landings, sliding landings, single engine approaches and

landings, quick stops, straight-in, 90, 180 and high speed/low level autos and hovering and taxiing autorotations. Demonstrate the different aircraft lighting schemes and their effect on NVDs. Emphasize crew coordination for emergencies during NVD operations. PUI will complete a minimum of 5 autorotations.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. SFAM-114.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. NSFI/PUI.

FAM-117

2.0 C 1 AH-1W A

Goal. RS - Familiarization consolidation.

Requirement

(1) Discuss any aircraft limitation, emergency procedure, aircraft system and complacency in the cockpit.

(2) Review ALL FAM stage maneuvers. PUI will complete a minimum of 5 autorotations.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. FAM stage complete through 116.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP/PUI.

FAM-118

2.0 C,R E 1 AH-1W A

Goal. RS - FAM stage evaluation.

Requirement. Conduct PUI jacket review and ensure all ATFs are in the PUI's APR.

(1) Discuss any aircraft limitation, emergency procedure, aircraft system and complacency in the cockpit.

(2) Demonstrate knowledge and safety considerations in all phases of flight covered in FAM stage, including emergencies. PUI will complete a minimum of 5 autorotations.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. FAM-117.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP/PUI.

4. Instruments (INST)

a. Purpose. To develop proficiency in actual/simulated instrument meteorological conditions (IMC).

b. General. Instrument sorties should be conducted under both day and night conditions. All instrument sorties, whether day or night, should be conducted under instrument conditions for the PUI, using an instrument hood when necessary. A minimum of one sortie will be conducted at night. No more than three sorties, or 5.0 total hours, will be flown in the simulator. Refresher pilots will complete their annual instrument check (RQRD-600) in conjunction with INST-125. Therefore, they will have completed the semi-annual minimums and instrument ground school prior to INST-125. Basic pilots whose instrument check will expire within three months of leaving the FRS will also meet the above requirements. Computer aided flight planning will be used to the greatest extent possible.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. Instrument stage ICW, Instrument Ground School (as applicable) and computer based flight planning.

e. Flight and Simulator Event Training. (2 Sorties, 4.0 Hours/3 Simulator Periods, 4.5 Hours).

SINST-120 1.5 C WST/APT S

Goal. RS - Introduce basic instrument flight.

Requirement

(1) Discuss instrument checklist, unusual attitudes, instrument autorotations, pilot/copilot attitude indicators, Instrument Takeoff (ITO) and standard rate climbs/descents/turns.

(2) Introduce placing and receiving clearance, instrument checklist, ITOs, Standard Instrument Departures (SIDs), standard and half-standard rate turns, turn pattern, vertical S-1, OSCAR pattern, recovery from unusual attitudes and power recovery instrument autos.

Performance Standards. Per the AH-1W NATOPS, MDG and NATOPS Instrument Flight Manual (NIFM).

Prerequisites. FAM-109.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. CSI/PUI.

SINST-121 1.5 C,R,M WST/APT S

Goal. RS - Introduce instrument navigation.

Requirement

(1) Discuss vertigo, TACAN procedures, CDI operation, station passage, IAF, FAF, DME, holding and entry procedures, loss of TACAN during approach, partial panel procedures, AN/APX(V)-100 transponder, AN/ARC-210 UHF/VHF radio, MDA, voice reports and missed approach.

(2) Introduce operation of IFF/SIF, partial panel, TACAN tracking, radial changes, arcing, point-to-point navigation, TACAN holding, instrument approach, missed approach and full instrument autos.

(3) Review placing and receiving instrument clearances, SIDs and ITOs. PUI will perform a minimum of 2 approaches.

Performance Standards. Per the AH-1W NATOPS, MDG and NIFM.

Prerequisites. SINST-120.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. CSI/PUI.

SINST-122

1.5 C,R,M WST/APT S

Goal. RS - Introduce radar approach procedures.

Requirement

(1) Discuss ground controlled approach (PAR and ASR), navigational instrument failure, transition from VMC to IMC, lost communications, Height Above Airport (HAA), Height Above Threshold (HAT), no gyro approach, visual and contact approach.

(2) Introduce ASR, PAR and no gyro PAR procedures. Emphasize voice communications, navigational instrument failure procedures and transition from VMC to IMC.

(3) Review filing/clearance procedures, SIDs, instrument autos and ITOs. PUI will perform a minimum of 3 precision approaches.

Performance Standards. Per the AH-1W NATOPS, MDG and NIFM.

Prerequisites. FAM-109.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. CSI/PUI.

INST-123

2.0 C,R,M 1 AH-1W A (N)

Goal. RS - Review basic instrument, TACAN and radar approach procedures.

Requirement

(1) Discuss criteria for alternate, filing below minimums, fuel consumption, true airspeed, ground speed, minimum fuel, emergency fuel and holding entry/procedures.

(2) Review TACAN tracking, radial change, arcing, holding, instrument approach, missed approach, point-to-point navigation and GCA procedures. Introduce UHF DF capability. PUI will perform a minimum of 2 approaches.

Performance Standards. Per the AH-1W NATOPS, MDG and NIFM.

Prerequisites. SINST-122.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP/PUI.

INST-125

2.0 C,R,M E 1 AH-1W A/S (N)

Goal. RS - Conduct instrument evaluation.

Requirement. Conduct PUI jacket review and ensure all ATFs are in the PUI's APR.

(1) Discuss instrument flight publications, airspace classification, cloud clearances and visibility requirements, inflight filing procedures, annual and semi-annual instrument and approach minimums, [DD-175](#), weather briefing requirements and spatial disorientation.

(2) Review weather planning/filing criteria, flight planning, instrument checklist, ITO and climb-out, SID, IFF/SIF operations, TACAN procedures, GCA procedures, unusual attitude, partial panel, airway navigation, voice reports, lost comm procedures and instrument autorotation. PUI will perform a minimum of 1 non-precision and 1 precision approach.

(3) PUI plan and execute an instrument evaluation flight IAW OPNAV 3710. This sortie can fulfill requirements for annual instrument check if required and minimums have been met. Evaluate all phase maneuvers and emergencies.

Performance Standards. Per the AH-1W NATOPS, MDG and NIFM.

Prerequisites. SINST-120 through INST-123.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP(IFBM)/PUI.

5. Formation (FORM)

a. Purpose. To introduce formation flight and develop proficiency in parade and tactical formation maneuvers.

b. General. At the completion of this stage, the PUI will be proficient at formation takeoffs and landings, rendezvous, parade, cruise, combat cruise, lead change and all formation maneuvers listed in the AH-1W NATOPS and MDG.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. Formation stage lecture, AH-1W TACMAN and ICW.

e. Flight and Simulator Event Training. (4 Sorties, 8.0 Hours).

FORM-130 2.0 2 AH-1W A

Goal. FS - Introduce formation flight.

Requirement

(1) Discuss FORM maneuvers, visual signals, lead change, inadvertent IMC and crew coordination.

(2) Demonstrate/introduce section takeoff, parade and cruise formations, breakup and rendezvous, crossovers, climbs and descents, section landings, parade, cruise turns and lead change. PUI will perform all maneuvers as lead and wingman.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. FAM-109.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP/PUI.

FORM-131 2.0 C,R,M 2 AH-1W A

Goal. RS - Introduce tactical formations.

Requirement

(1) Discuss combat cruise, combat spread, lookout doctrine, wingman awareness/responsibilities, aircrew coordination, use of cover in turns, use of radius of turn and tactical formation maneuvers.

(2) Demonstrate/introduce combat cruise, combat spread, TAC turns, break turns, split turns, reversals, digs and pinches, cross turns and center turns.

(3) Review formation maneuvers introduced in FORM-130.

Performance Standards. Per the AH-1W NATOPS, TACMAN and MDG.

Prerequisites. FORM-130.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP/PUI.

<u>FORM-132</u>	<u>2.0</u>	<u>C,R 2 AH-1W A NS</u>
	<u>Goal.</u>	RS - NVD FORM introduction.
	<u>Requirement</u>	
		(1) Discuss NVD formation flight, aircraft lighting and visual cues.
		(2) Introduce formation flight using NVDs. Review formation maneuvers introduced in previous formation sorties.
	<u>Performance Standards.</u>	Per the AH-1W NATOPS, MDG and MAWTS-1 NVD Manual.
	<u>Prerequisite.</u>	NITE LAB, FAM-115 and FORM-130.
	<u>Ordinance.</u>	N/A.
	<u>External Syllabus Support.</u>	N/A.
	<u>Crew.</u>	NSFI/PUI.
<u>FORM-133</u>	<u>2.0</u>	<u>C 3+ AH-1W A</u>
	<u>Goal.</u>	RS - Division formation introduction.
	<u>Requirement</u>	
		(1) Discuss mission coordination, division formation and maneuvers.
		(2) Demonstrate/introduce division takeoff, rendezvous, cruise and tactical formation maneuvers. Emphasize maneuvering in tactical formation. Division lead will ensure that all PUIs cycle through each position within the flight.
	<u>Performance Standards.</u>	Per the AH-1W NATOPS and MDG.
	<u>Prerequisites.</u>	FORM-131.
	<u>Ordinance.</u>	N/A.
	<u>External Syllabus Support.</u>	N/A.
	<u>Crew.</u>	BIP/PUI.

6. Terrain Flight (TERF)

a. Purpose. To introduce low level, contour and NOE modes of TERF flight and develop proficiency in the application of TERF procedures.

b. General. PUI will demonstrate an understanding of the TERF modes (low level, contour, and NOE) and proficiency in low level, contour, and NOE flight maneuvers. PUI will also demonstrate a basic knowledge of current threat systems and their applicability to TERF. PUI will compute weight and balance prior to each sortie. PUI will also demonstrate a solid knowledge of GPS/EGI operations and use of the MDL if installed.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. TERF stage lecture, AH-1W NATOPS, MDG and ICW.

e. Flight and Simulator Event Training. (3 Sorties, 6.0 Hours).

TERF-140 2.0 C 1 AH-1W A

Goal. FS - Introduce TERF techniques.

Requirement

(1) Discuss TERF modes of flight, performance checks, masking/unmasking, turns about the nose/tail, engine failure HIGE/HOGE, loss of tail rotor authority, low "G" maneuvers, low altitude hazards, mast bumping and crew coordination.

(2) Demonstrate the TERF brief.

(3) Demonstrate/introduce low level, contour and NOE modes of flight to include performance checks, masking and unmasking, NOE quick stops, turns, bunts and rolls.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. FAM-109.

Ordinance. N/A.

External Syllabus Support. Authorized TERF area.

Crew. TERFI/PUI.

TERF-141 2.0 C,R,M 1 AH-1W A

Goal. RS - Refine TERF techniques.

Requirement

(1) Discuss target acquisition, target analysis (METT-TSL), battle positions, firing points and hazard map preparation.

(2) Review all TERF-140 maneuvers with emphasis on comfort level.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. TERF-140.

Ordinance. N/A.

External Syllabus Support. Authorized TERF area.

Crew. TERFI/PUI.

TERF-142 2.0 C,R,M 1 AH-1W A NS

Goal. FS - Introduce TERF techniques using NVDs.

Requirement

(1) Discuss NVD TERF techniques, night vision techniques, terrain reflectivity, night visual cues, meteorological considerations, NVD environmental considerations, aircraft preparation and dark adaptation.

(2) Review all TERF-140 maneuvers using NVDs.

Performance Standards. Per the AH-1W NATOPS, MDG and MAWTS-1 NVD Manual.

Prerequisite. NITE Lab, FAM-115, and TERF-140.

Ordinance. N/A.

External Syllabus Support. Authorized TERF area.

Crew. NSFI/PUI.

7. Navigation (NAV)

a. Purpose. To develop the ability to conduct day/night navigation.

b. General. PUI must demonstrate the ability to navigate preplanned routes and identify positions using charts/maps at altitude and in the TERF environment. Mission Planning System (MPS) and available navigation systems shall be utilized to the greatest extent possible.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. NAV stage lecture, ICW, CDU Trainer and AH-1W TACMAN.

e. Flight and Simulator Event Training. (3 Sorties, 6.0 Hours).

NAV-150 2.0 2 AH-1W A

Goal. FS - Introduce low level and contour TERF navigation.

Requirement

(1) Discuss low level navigation, contour navigation, route selection, checkpoint selection and Joint Operations Graphic (JOG).

(2) Introduce navigation in the low level and contour mode to at least 5 predetermined contour terrain features using a 1:250,000 and 1:50,000 scale map. Navigate using terrain features rather than manmade objects. Stress checkpoint selection and use of prominent terrain features. PUI will demonstrate proficiency in GPS/EGI operations.

Performance Standards. Per the AH-1W NATOPS, TACMAN and MDG. PUI must arrive at each checkpoint within 1 minute of the planned time. Remaining oriented within 500 meters. Emphasize crew coordination and standard verbal descriptions of terrain and hazards.

Prerequisites. N/A.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. TERFI/PUI.

NAV-151 2.0 C 2 AH-1W A

Goal. OS - Introduce NOE TERF navigation.

Requirement

(1) Discuss NOE navigation, map preparation, distance estimation, terrain analysis, EGI/GPS systems and application of lost procedures.

(2) PUI will perform a map study using a 1:50,000 map and navigate a predetermined route with a minimum of 5 checkpoints in the NOE mode.

Performance Standards. Per the AH-1W NATOPS, TACMAN and MDG. PUI must arrive at each checkpoint within 1 minute of the planned time, remaining oriented within 500 meters along the route of flight. Successfully load route utilizing MDL (if available).

Prerequisites. TERF-140.

Ordinance. N/A.

External Syllabus Support. Authorized TERF area.

Crew. TERFI/PUI.

NAV-152

2.0 C,R 2 AH-1W A NS

Goal. FS - Introduce navigation on NVDs using visual navigation techniques and GPS, if available.

Requirement

(1) Brief and discuss night navigation considerations, electrical failures, lost plane procedures, boundaries, time distance checks, distance estimation, map legend information, map preparation, NATOPS standard data charts, and available GPS systems. Use MPS for route computation when available.

(2) Plan and navigate at 500 to 1,000 feet AGL to at least 10 preplanned checkpoints using 1:250,000 scale JOG (Air) maps. The first 5 checkpoints should be found without the use of any navaid other than a map; a navaid, such as the GPS can be used to find the remaining checkpoints. Checkpoints should have a minimum of 10 NM separation.

Performance Standards. Per the AH-1W NATOPS, TACMAN and MDG. PUI to remain oriented within 1 NM. Successfully load route utilizing MDL (if available).

Prerequisite. FAM-115.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. NSFPI/PUI.

8. Specific Weapons Delivery (SWD)

a. Purpose. To develop the ability to deliver air-to-ground weapons employing all available sensors and weapons systems. IP will stress error analysis and multiple sensor usage during weapons delivery.

b. General. At the completion of this stage, PUI will demonstrate proficiency in all ordnance delivery techniques. A LASER safe range is required for the NTS LASER designator and range finder. TOW plugs and captive HELLFIRE will be used to the maximum extent possible to exercise weapons switchology and symbology.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. SWD stage lecture, ICW on BCWD and applicable chapters of the AH-1W NATOPS and TACMAN.

e. Flight and Simulator Event Training. (3 Sorties, 6.0 Hours/3 Simulator Periods, 4.5 Hours).

SSWD-160 1.5 C,R WST S

Goal. FS - Introduce Cobra weapon systems.

Requirement

(1) Discuss arm/dearm checklist, after arming checklist and NTS operations.

(2) Introduce use of THCDP and NTS, turret hover fire and running fire using the MFD, TSU and HSS, all modes of HELLFIRE and TOW operations and constraints associated with CCDTV/DVO and FLIR. Emphasize NTS and weapons switchology, checklists and crew coordination.

(3) Review 20 and 30 degree dives.

Performance Standards. Per the AH-1W NATOPS, TACMAN and MDG.

Prerequisites. FAM-109.

Ordnance. N/A.

External Syllabus Support. N/A.

Crew. CSI/PUI.

SWD-161 2.0 C 2 AH-1W A

Goal. FS - Introduce SWD gunnery.

Requirement

(1) Discuss PGU series ammunition, cocking checklist, runaway gun, armament preflight, telescopic sight unit, turret system, HSS operations, LASER system, post firing/before landing checklist, after dearm checklist, pilot override, boresight and turret malfunctions.

(2) Demonstrate a range brief and range sweep.

(3) Introduce arm/dearm checklists/procedures, all modes of turret operation, THCDP/NTS operations. Emphasize ICS communication and crew coordination.

(4) Review turret fire and NTS switchology.

Performance Standards. Per the AH-1W NATOPS, TACMAN and MDG.

Prerequisites. SSWD-160.

Ordnance. 400 rounds 20mm.

External Syllabus Support. Live fire range.

Crew. WTO/PUI.

SSWD-162

1.5 C,R WST S

Goal. RS - Introduce weapon systems.

Requirement

(1) Discuss NARCADS and ordnance emergencies.

(2) Introduce hover and running fire, rocket delivery using hover, running, pop-up and 20/30 degree diving fire.

(3) Review TOW and HELLFIRE associated procedures and constraints and switchology. Emphasize front and rear seat switchology inter-relationships and crew coordination.

Performance Standards. Per the AH-1W NATOPS, TACMAN and MDG.

Prerequisites. FAM-109.

Ordnance. 400 rounds 20mm.

External Syllabus Support. N/A.

Crew. CSI/PUI.

SWD-163

2.0 C 2 AH-1W A

Goal. RS - Review SWD gunnery.

Requirement

(1) Discuss rocket motors, fuses and warheads, rocket/gun reticles, Heads Up Display (HUD), rocket delivery to include delivery/frag pattern charts, 20mm cannon delivery and error analysis.

(2) Review rocket and turret delivery from diving and running fire with emphasis on weapon systems operation, all related emergencies, cleared hot procedures and range brief.

Performance Standards. Per the AH-1W NATOPS, TACMAN and MDG.

Prerequisites. SWD-162.

Ordnance. 200 rounds 20mm, 7 x 2.75 inch rockets, 4 x 5.00 inch rockets.

External Syllabus Support. Live fire range.

Crew. WTO/PUI.

SWD-164

2.0 C E 2 AH-1W A

Goal. RS - Weapon systems evaluation.

Requirement

(1) Discuss gunner armament control panel, helmet sighting system, gunner sight hand control, target acquisition, range estimation and WERM rule.

(2) Review rocket and turret hover fire, rocket and turret running fire, weapon system operation and all related emergencies. PUI will demonstrate a CEP of 15 meters from turret fire if manned range is available. Emphasize range sweep, target I.D. and crew coordination. PUI will conduct a range brief.

Performance Standards. Per the AH-1W NATOPS, TACMAN and MDG.

Prerequisites. SWD-163.

Ordnance. 200 rounds 20mm, 12 x 2.75 inch rockets.

External Syllabus Support. Live fire range.

Crew. WTO/PUI.

SSWD-165

1.5 C,R,M WST S

Goal. FS - Weapons review.

Requirement

(1) Discuss TOW Missile System (TMS), TMS Built-In Test, HELLFIRE missile system and weapons envelopes. PUI will emphasize weapons system integration, weapon delivery envelopes and front seat ordnance emergencies.

(2) Review crew coordination and all modes of TOW and HELLFIRE operation.

Performance Standards. Per the AH-1W NATOPS, TACMAN and MDG.

Prerequisites. SWD-164.

Ordnance. N/A.

External Syllabus Support. N/A.

Crew. CSI/PUI.

9. Tactics (TAC)

a. Purpose. To demonstrate the ability to tactically employ aircraft weapon systems.

b. General. PUI will become familiar with applicable chapters of the AH-1W TACMAN in preparation for this sortie.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. Tactics Phase Lectures and ICW.

e. Flight and Simulator Event Training. (1 Sortie, 2.0 Hours).

TAC-170 2.0 C 2 AH-1W A

Goal. FS - Tactical flight introduction.

Requirement

(1) Discuss attack patterns, route selection, weapon selection, target analysis, battle position selection, mission planning, section tactics and aircrew coordination.

(2) Demonstrate tactical briefing, section maneuvering, traveling, bounding, bounding overwatch, use of holding areas, battle positions, attack patterns and reaction to enemy fires.

(3) Review tactical formations with emphasis on maneuvering to engage/disengage. Emphasize lookout doctrine and crew coordination.

Performance Standards. Complete all discussion items, checklists and maneuvers IAW the AH-1W NATOPS, TACMAN and MDG.

Prerequisites. PUI will be FAM-109, FORM-130, TERF-140 and NAV-150 complete prior to starting stage.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. WTO/PUI.

10. Core Skill Introduction Check

a. Purpose. To review all areas of instruction, demonstrate proficiency and knowledge of all maneuvers to certify the PUI as PQM and core skill introduction complete.

b. General. The PUI will demonstrate proficiency through the core skill introduction phase. Upon completion of the evaluation event, the PUI will be designated as PQM per AH-1W NATOPS Chapter 5. CSIX-181 meets the qualifications for the 7565 MOS and will serve as the initial NATOPS evaluation (RQRD-601).

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. N/A.

e. Flight and Simulator Event Training. (1 Sortie, 2.0 Hours, 1 Simulator period, 1.5 hours).

SCSIX-180 1.5 C,R,M WST/APT S

Goal. RS - Emergency procedures trainer.

Requirement

(1) Discuss any emergency procedure, control feedback, collective feedback, rotor blade stall, wake turbulence, land as soon as possible and land as soon as practical.

(2) Introduce/Review aircraft emergencies with emphasis on causes, indications and procedures to recover aircraft. PUI to demonstrate knowledge and safety considerations in all phases of flight covered in FAM stage, stressing emergency procedures.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. All core skill introduction stages complete.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. CSI/PUI.

CSIX-181 2.0 C,R,M E 1 AH-1W A

Goal. RS - Core skill introduction check.

Requirement

(1) Discuss responsibilities of the Pilot in Command (PIC) IAW OPNAV 3710.7, all previously introduced flight maneuvers, emergency procedures, aircraft limitations and aircraft systems.

(2) PUI must be able to safely demonstrate flight proficiency and knowledge of all maneuvers and procedures covered in the core skill introduction stage.

Performance Standards. Per the AH-1W NATOPS and MDG.

Prerequisites. All core skill introduction stages complete.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. NI-ANI/PUI.

132. CORE SKILL BASIC PHASE

1. Purpose. To produce a TERF and NSQ (HLL) qualified copilot. The focus of training is front seat combat proficiency.

2. General

a. Upon completion of this phase, the PUI will be TERF and NSQ (HLL) complete, and may conduct additional missions as specified by the squadron commander.

b. Completion of TERF-211 meets the requirements for the PUI to be TERF qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as TERF qualified shall be placed in the NATOPS jacket and APR and a Tracking Code of QUAL-610 shall be logged.

c. Completion of all 200-level night system events meets the requirements for the PUI to be NSQ (HLL) qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as NSQ (HLL) qualified shall be placed in the NATOPS jacket and APR and a Tracking Code of QUAL-611 shall be logged.

3. Ground Training. The ground training requirements are listed per stage of training, and must be completed prior to the associated stage or flight. Squadrons may schedule training earlier in phase to allow maximum student participation.

4. Terrain Flight/Navigation (TERF)

a. Purpose. To refine proficiency in terrain flight and navigation.

b. General. PUI will be TERF qualified prior to proceeding to follow-on stages, not to include simulator events. PUI will demonstrate proficiency in terrain flight and navigation. Once complete in this stage the pilot may be TERF qualified (QUAL-610) in writing at the discretion of the commanding officer.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. Per the MAWTS-1 Course Catalog.

e. Flight and Simulator Event Training. (2 Sorties, 4.0 Hours).

TERF-210 2.0 2 AH-1W A

Goal. FS - Review TERF maneuvers and navigation.

Requirement

(1) Discuss: terrain appreciation, CRM during navigation; terminology, load computations and HIGE/HOGE requirements; squadron tactical SOP, terrain flight tactical application, 1686 navigational system use and operation; high gross weight handling characteristics, and obstacle avoidance.

(2) Demonstrate/introduce all three modes of TERF, loading and operation of the 1686 EGI/GPS navigation system and proper CRM during TERF.

(3) Review all TERF maneuvers. Conduct a route brief and a minimum of 5 landings to an unimproved landing site.

(4) Conduct a navigation route with a minimum of 5 checkpoints utilizing a 1:50,000 scale map, minimum length 20 NM.

Performance Standards. Remain oriented within 500 meters and within 1 minute of planned time. Conduct all TERF maneuvers per the AH-1W NATOPS and TACMAN.

Prerequisites. N/A.

Ordinance. N/A.

External Syllabus Support. Authorized TERF route.

Crew. TERFI/PUI.

TERF-211

2.0

C,R 2 AH-1W A NS

Goal. RS - Review TERF maneuvers and navigation using NVDs.

Requirement

(1) Discuss SOP lighting configurations, NVD focus procedures, EPs at night, TERF maneuvers at night, NVD scan patterns, and CRM during navigation and cultural lighting.

(2) Demonstrate/introduce proper NVD scan patterns, light configurations, NVD TERF flight/maneuvers, and CRM during navigation and obstacle avoidance.

(3) PUI will conduct a route brief and conduct a minimum of 5 landings to an unimproved landing site.

(4) Conduct a navigation route with a minimum of 5 checkpoints utilizing a 1:50,000 scale map, minimum length 20 NM.

Performance Standards. Remain oriented within 500 meters and within 1 minute of planned time. Conduct all TERF maneuvers IAW the AH-1W NATOPS and TACMAN.

Prerequisites. TERF-210.

Ordinance. N/A.

External Syllabus Support. Authorized TERF route.

Crew. NSI/PUI.

6. Reconnaissance (REC)

a. Purpose. To develop proficiency in reconnaissance operations.

b. General. The PUI will demonstrate proficiency in aircraft system employment for target detection, recognition and identification during reconnaissance operations. Emphasize sensor management during reconnaissance operations for target detection, recognition and identification.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. Per the MAWTS-1 Course Catalog. EODTA (CBT).

e. Flight and Simulator Event Training. (2 Sorties, 4.0 Hours).

REC-230

2.0

C 2 AH-1W A

Goal. FS - Introduce day visual reconnaissance.

Requirement. AH-1W with operable VCR.

(1) Discuss NTS components/switchology/functions, left hand grip functions, use of the VCR, sensor management, basic VR techniques, ALE-39 components/programming and a ground commander's Information Requirements (IRs).

(2) Demonstrate/introduce IFREP/MISREP procedures, traveling, traveling overwatch, bounding overwatch, intelligence collection and dissemination procedures.

(3) Review proper terminology, effective aircraft control in all modes of terrain flight and landings to an unimproved landing site. Conduct a minimum of 5 landings to an unimproved landing site.

(4) PUI will conduct reconnaissance, utilizing all four methods while performing overwatch procedures and proper use of the NTS IAW the AH-1W NATOPS and TACMAN using a 1:50,000 scale map. The VCR tape of the sortie should be used during the debrief as a measure of effectiveness.

Performance Standards. Per the AH-1W NATOPS and TACMAN.

Prerequisites. TERF-211.

Ordinance. N/A.

External Syllabus Support. Authorized TERF area, Tactical Radar Threat Generator (TRTG) and thermally augmented threat vehicles if available.

Crew. WTO/PUI.

REC-231

2.0

C, R 2 AH-1W A NS

Goal. FS - Introduce night visual reconnaissance.

Requirement. AH-1W with operable VCR.

(1) Discuss capabilities and limitations of the NTS for detection/recognition/identification, ALQ-144 components/operation and proper techniques for adjusting the sensor suite for optimal performance under varying conditions.

(2) Demonstrate/introduce use of sensor performance prediction tools (EOTDA, TISP, and TAWS), use of PHS/GHS acquire systems and the use of an IR laser pointer.

Performance Standards. Same as REC-230 utilizing NVDs.

Prerequisites. TERF-211.

Ordinance. N/A.

External Syllabus Support. Authorized TERF area; TRTG and thermally augmented threat vehicles if available.

Crew. NSI/PUI.

7. Specific Weapons Delivery (SWD)

a. Purpose. To develop proficiency in SWD and weapon systems employment.

b. General. At the completion of this stage, the PUI will have displayed proficiency at delivering ordnance and proper use of the NTS under all threat conditions with mixed ordnance loads. Emphasis will be on CRM while utilizing the ordnance systems.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. IAW the MAWTS-1 Course Catalog.

e. Flight and Simulator Event Training. (4 Sorties, 8.0 Hours/2 Simulator Periods, 3.0 Hours).

SSWD-240 1.5 C,R WST/APT S

Goal. FS - To develop proficiency using TOW and HELLFIRE missile systems.

Requirement

(1) Discuss pre/post-launch constraints, designation/delay options, cloud ceiling limitations, J-LASER terminology, JMEMs, SDZs, weaponeering and use of TOW and HELLFIRE against armored threats.

(2) Review TOW and HELLFIRE operations in all modes of delivery and front seat rocket and turret delivery in all modes.

Performance Standards. Conduct the arm/dearm and the Penetration/Depenetration checklist. Conduct simulated missions to engage and destroy point targets and armored threats with a minimum of eight TOW and HELLFIRE engagements IAW the AH-1W NATOPS and TACMAN while exhibiting proper switchology and weaponeering.

Prerequisites. N/A.

Ordnance. N/A.

External Syllabus Support. N/A.

Crew. WTO/PUI.

SWD-241 2.0 C 2 AH-1W A (NS)

Goal. FS - To conduct a live TOW missile shoot and refine TOW/HELLFIRE proficiency.

Requirement

(1) Discuss ordnance preflight procedures, TOW related emergency procedures, modes of delivery and missile firing reports/data required.

(2) Demonstrate/introduce simulated missions to destroy point targets, including armored threats. Conduct live fire to hit a tank size target while in the TERF environment.

(3) Review TOW and HELLFIRE operations using all modes of delivery, TOW employment, capabilities, limitations, pre- and post-launch constraints, switchology, symbology, terminology and weaponeering.

Performance Standards. During the first attempt, a successful live TOW missile launch after proper missile selection, TOW ready and attack flags achieved, while within engagement envelope.

Prerequisites. TERF-211.

Ordnance. 1 live TOW missile and 1 captive HELLFIRE.

External Syllabus Support. Live fire and LASER safe range.

Crew. WTO (NSI)/PUI.

SWD-242

2.0 C,R 2 AH-1W A (NS)

Goal. FS - To conduct a HELLFIRE shoot and develop TOW/HELLFIRE proficiency.

Requirement

(1) Discuss target acquisition in the night environment, backscatter avoidance techniques, designation employment considerations/techniques, HELLFIRE related emergency procedures and missile firing reports/data required.

(2) Demonstrate/introduce simulated missions to destroy point targets including armored threats while conducting a HELLFIRE shoot to hit a tank size target.

(3) Review TOW/HELLFIRE operations, constraints and employment using all modes of delivery, all sensor systems, LASER, HELLFIRE pre- and post-launch constraints, switchology, weaponeering and J-LASER terminology.

Prerequisites. TERF-211.

Performance Standards. During the first attempt, perform successful missile launch/engagement based on proper missile selection, system bore sight, mode of delivery selection, LASER code entry and within weapons employment envelope.

Ordnance. 1 TOW plug and 1 live/captive HELLFIRE.

External Syllabus Support. Live fire and LASER safe range.

Crew. WTO (NSI)/PUI.

SSWD-243

1.5 C WST/APT/AH-1W S/A (NS)

Goal. RS - To develop proficiency at ordnance delivery.

Requirement

(1) Discuss weapon switchology with emphasis on ordnance trouble shooting, attack patterns, SOP ordnance procedures, use of rocket charts and delivery techniques, target fixation, ALE-39 components/functions and rocket/gun related emergency procedures.

(2) Demonstrate/introduce 20mm fixed forward and HSS turret fire, rocket delivery using hover, running, pop-up, and diving fire.

(3) Review all ordnance emergencies, CRM during ordnance evolutions and HUD symbology.

Performance Standards. Successful employment of the 20mm weapon system at ranges from 500-1500 meters, exhibiting proper impact detection and adjustment, to work towards effect on target while adhering to all range regulations. Successful employment of 2.75 inch rockets at ranges from 500-2000 meters, exhibiting proper impact detection and adjustment, to work towards effect on target while adhering to all range regulations.

Prerequisites. N/A.

Ordnance. N/A.

External Syllabus Support. Live fire range and LASER safe range if available.

Crew. WTO (NSI)/PUI.

SWD-244

2.0 C 2 AH-1W A NS

Goal. RS - To develop proficiency at ordnance delivery using NVDs.

Requirement

(1) Discuss night ordnance delivery effects, switchology with an emphasis on troubleshooting, use of IR LASER pointers, APR-44 components and operation and CRM regarding target acquisition.

(2) Demonstrate/introduce fixed forward and HSS turret fire, rocket delivery using all modes of delivery and attack patterns with NVDs.

(3) Review all ordnance emergencies, BCWD and error analysis.

Prerequisites. TERF-211.

Performance Standards. Successful employment of the 20mm weapon system at ranges from 500-1500 meters, exhibiting proper impact detection and adjustment, to work towards effect on target while adhering to all range regulations. Successful employment of 2.75 inch rockets at ranges from 500-2000 meters, exhibiting proper impact detection and adjustment, to work towards effect on target while adhering to all range regulations.

Ordnance. 300 rounds 20mm, 7 x 2.75 inch rockets, 4 x 5.00 inch rockets, 1 TOW plug or captive HELLFIRE, 10 chaff, 10 flares and turret mounted IR pointer.

External Syllabus Support. Live fire range and LASER safe range if available.

Crew. NSI/PUI.

SWD-245

2.0 C 2 AH-1W A NS

Goal. OS - Refine ordnance delivery using NVDs.

Requirement

(1) Discuss night ordnance delivery effects, switchology with an emphasis on troubleshooting, use of IR LASER pointers, APR-44 components and operation, and CRM with regard to target acquisition.

(2) Demonstrate/introduce fixed forward and HSS turret fire and rocket delivery using all modes of delivery and attack patterns with NVDs.

(3) Review all ordnance emergencies, BCWD and error analysis.

Prerequisites. SWD-244.

Performance Standards. Successful employment of the 20mm weapon system at ranges from 500-1500 meters, exhibiting proper impact detection and adjustment, to work towards effect on target while adhering to all range regulations. Successful employment of 2.75 inch rockets at ranges from 500-2000 meters, exhibiting proper impact detection and adjustment, to work towards effect on target while adhering to all range regulations.

Ordnance. 300 rounds 20mm, 7 x 2.75 inch rockets, 1 captive HELLFIRE or 1 TOW plug, 10 chaff, 10 flares and turret mounted IR pointer.

External Syllabus Support. Live fire range and LASER safe range if available.

Crew. NSI/PUI.

8. Escort (ESC)

a. Purpose. To develop proficiency in prescribed heliborne or surface escort formations and maneuvers.

b. General. The pilot will develop a working knowledge of escort formations, maneuvers and techniques associated with heliborne operations. Ordnance is optional for this stage of training. If ordnance is utilized, the PUI shall have completed the SWD flight corresponding to the ordnance load.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. Per the MAWTS-1 Course Catalog.

e. Flight and Simulator Event Training. (3 Sorties, 6.0 Hours).

ESC-250 2.0 C 2 AH-1W A

Goal. OS - Demonstrate and introduce helicopter escort procedures.

Requirement

(1) Discuss capabilities/employment of TOW/HELLFIRE during escort missions, advantages/disadvantages of attached/detached escort, AIM-9 switchology and employment techniques, formations, LZ clearance/coverage techniques and procedures, threat reaction SOPs, immediate action procedures, and escort/assault support terminology.

(2) Demonstrate/introduce escort responsibilities and current tactical doctrine during assault support operations. Introduce attached/detached/combined escort, escort/assault support mission planning and operations within the objective area.

Performance Standards. Exhibit a thorough understanding of escort responsibilities and assault support operations.

Prerequisites. TERF-211.

Ordnance. 1 TOW plug or captive HELLFIRE and 1 captive AIM-9.

External Syllabus Support. One or more assault aircraft and a LASER safe range (if required).

Crew. WTO/PUI.

ESC-251 2.0 C, R 2 AH-1W NS

Goal. OS - Demonstrate and introduce night helicopter escort using NVDs.

Requirement

(1) Discuss night LZ clearance/coverage techniques and procedures, night escort techniques/procedures, lighting and threat detection, supporting arms coordination, fragmentation patterns, assault sectors of fire and escort/assault integration and deconfliction.

(2) Demonstrate/introduce tactical employment of ordnance in close proximity to assault helicopters enroute and in the LZ (objective area), LZ coverage patterns and ordnance delivery procedures at night with NVDs.

Performance Standards. Exhibit a thorough understanding of night escort responsibilities and assault support operations.

Prerequisites. ESC-250.

Ordnance. 1 TOW plug or Captive HELLFIRE, and 1 captive AIM-9.

External Syllabus Support. One or more assault aircraft and a LASER safe range (if required).

Crew. NSI/PUI.

ESC-252

2.0 C 2 AH-1W A (NS)

Goal. OS - Introduce surface force escort operations.

Requirement

(1) Discuss surface force escort procedures and techniques. Emphasize tactical employment of ordnance in close proximity to surface vehicles, terminal controller procedures both in the enroute phase and in the objective area. Discuss ordnance fragmentation patterns, detailed fire support planning/integration with the supported unit. Introduce route coverage patterns, actions in the objective area and ordnance delivery techniques and procedures.

(2) Discuss capabilities/employment of Sidewinder/TOW/HELLFIRE in support of GCE scheme of maneuver, METT-TSL requirements, escort fire support coordination, overwatch techniques, methods of escort, route and objective clearance/coverage techniques and procedures.

Performance Standards. Exhibit a thorough understanding of surface force escort responsibilities in support of the GCE scheme of maneuver.

Prerequisites. TERF-211.

Ordnance. 1 TOW plug or captive HELLFIRE, 1 captive AIM-9 and turret mounted IR pointer.

External Syllabus Support. One ground/amphibious unit.

Crew. WTO (NSI)/PUI.

9. Offensive Air Support (OAS)

a. Purpose. To develop proficiency in OAS under varying threat conditions.

b. General. The PUI will display proficiency in RW CAS in support of a ground unit.

- c. Crew Requirements. As listed at the end of each event.
- d. Ground/Academic Training. Per the MAWTS-1 Course Catalog.
- e. Flight and Simulator Event Training. (2 Sorties, 4.0 Hours/1 Simulator Period, 1.5 Hours).

SOAS-260 1.5 C WST/APT S

Goal. FS - Provide simulated RW CAS to ground forces.

Requirement

(1) Discuss plotting BPs, movement from HAs to BPs, objective area timing, CRM and lookout doctrine.

(2) Demonstrate/introduce a tactical RW SIMCAS mission. Move from a low to medium threat environment during the sortie utilizing CAS mission briefs with and without target marks.

(3) Review all FS ordnance delivery procedures. Conduct a minimum of 5 RW CAS missions utilizing guns, rockets and PGMs in support of a ground force.

Performance Standards. Exhibit a thorough understanding of the CAS mission brief and standard fire support coordination measures used when providing RW CAS.

Prerequisites. N/A.

Ordnance. N/A.

External Syllabus Support. N/A.

Crew. WTO/PUI.

OAS-261 2.0 C 2 AH-1W A

Goal. OS - Provide RW CAS to ground forces.

Requirement

(1) Discuss objective area timing, attack and cover elements, AH-1W weapons integration/synchronization with GCE assets, friendly marking techniques/procedures, identification of friendly/enemy positions and MACCS integration.

(2) Demonstrate/introduce a tactical RW CAS mission utilizing CAS mission briefs, with and without a mark, in a low to medium threat environment.

(3) Review FSC measures, terminal control, BP location, HA to BP movement, CRM principles during RW CAS and terminology. Conduct a minimum of 2 RW CAS missions utilizing CAS mission briefs.

Performance Standards. Exhibit a thorough understanding of the CAS mission brief. Ensure RW ordnance impacts within 30 seconds of the assigned TOT and follow-on ordnance effects are per the TACP directed adjustments.

Prerequisites. TERF-211 and SOAS-260.

Ordinance. 500 rounds 20mm, 7 x 2.75 inch rockets, 1 TOW plug or 1 captive HELLFIRE, 10 chaff, 10 flares.

External Syllabus Support. Live fire range, TACP, LASER safe range (if required).

Crew. WTO/PUI.

OAS-262

2.0

C, R 2 AH-1W A NS

Goal. FS - To provide RW CAS to ground forces at night and qualify the PUI as NSQ (HLL).

Requirement

(1) Discuss night/IR marking methods, employment capabilities of the NTS, sensor management, terminal control procedures at night and CRM during night RW CAS missions.

(2) Demonstrate/introduce a tactical RW CAS mission at night with NVDs utilizing CAS mission briefs, in a low to medium threat environment.

(3) Review J-LASER terminology, IR pointer usage, friendly marking techniques/procedures, identification of friendly/enemy positions and objective area timing. Conduct a minimum of 2 RW CAS missions at night with NVDs utilizing CAS mission briefs.

Performance Standards. Exhibit a thorough understanding of the CAS mission brief. Ensure RW ordnance impacts within 30 seconds of the assigned TOT and ensure ordnance effects are IAW the TACP directed adjustments.

Prerequisites. TERF-211 and SOAS-260.

Ordinance. 500 rounds 20mm, 7 x 2.75 inch rockets, 1 TOW plug or captive HELLFIRE, 10 chaff, 10 flares and turret mounted IR pointer.

External Syllabus Support. Live fire range, TACP, LASER safe range if available.

Crew. NSI/PUI.

133. CORE SKILL ADVANCED PHASE

1. Purpose. To produce a Core Skill Advanced pilot. Upon completion of the Core Skill Advanced phase, pilots shall be proficient in all core skills.

2. General. Upon completion of the Core Skill Advanced phase, pilots may be designated NSQ (LLL), Attack Helicopter Commander (AHC), and Forward Air Controller (Airborne) [FAC(A)].

a. Completion of all ANSQ events meet the requirements for the PUI to be NSQ (LLL) qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as ANSQ (LLL) qualified shall be placed in the NATOPS jacket, APR and a Tracking Code of QUAL-612 shall be logged.

b. Completion of the FAC stage meets the requirements for the PUI to be FAC(A) qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as FAC(A) qualified shall be placed in the NATOPS jacket, APR and a Tracking Code of QUAL-624 shall be logged.

c. Completion of the Core Skill Basic and the EW, ANSQ and OAS stages through OAS-324 of the Core Advanced phase meet the requirements for the PUI to be eligible for the AHC designation. Upon completion of any previously flown OAS or ESC event and at the discretion of the squadron commanding officer a letter designating the PUI as an AHC shall be placed in the NATOPS jacket, APR and a Tracking Code of DESG-631 shall be logged.

3. Ground Training. The ground training requirements are listed per stage and must be completed prior to the associated stage/flight. Squadrons may schedule training earlier in stage to allow maximum student participation.

4. Electronic Warfare (EW)

a. Purpose. To introduce offensive/defensive electronic countermeasures, tactics, employment of Aircraft Survivability Equipment (ASE) and employment of precision guided munitions in an EW environment.

b. General. An EW range and/or a TRTG/threat simulator shall be used. Use of a ship's radar system or MACCS facility may be substituted for non-simulator events.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. Per the MAWTS-1 Course Catalog.

e. Flight and Simulator Event Training. (1 Sortie, 2.0 Hours/1 Simulator Period, 1.5 Hours).

<u>SEW-300</u>	<u>1.5</u>	<u>C,R</u>	<u>WST/APT</u>	<u>S</u>
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Goal. RS - ASE and EW Introduction.

Requirement

(1) Discuss ALE-39 expendable characteristics.

(2) Introduce APR-39, APR-44, ALQ-144, and ALE-39 systems operation. Introduce tactical employment of PGMs versus preplanned and reactive targets in an EW environment. Observe an entire threat missile engagement sequence with emphasis on system indications. Introduce threat radar systems and their associated APR-39/44 indications.

(3) Conduct a preplanned attack against an EW threat. Conduct a reactive attack against an EW threat. Execute appropriate evasive action in response to a previously un-located EW threat.

Performance Standards. Successfully operate (energize and BIT) and troubleshoot APR-39, APR-44, ALQ-144 and ALE-39 systems. Given a threat, load an appropriate ALE program.

Prerequisites. N/A.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. WTO/PUI.

EW-301

2.0 C 1 AH-1W A

Goal. RS - ASE and EW practical application.

Requirement. AH-1W equipped with operable ASE suite.

(1) Review APR-39, APR-44, ALQ-144, and ALE-39 systems operation. Review tactical employment of PGMs versus preplanned and reactive targets in an EW environment. Review threat radar systems and their associated APR-39/44 indications. Review ALE-39 expendable characteristics.

(2) Discuss the capabilities/limitations/weapon envelopes of potential threat systems, radar resolution cells, radar horizons, terrain profile analysis and related tactical considerations. Demonstrate maneuvers necessary to avoid detection from enemy radar and infrared guided and optically tracked systems. Emphasize effectiveness of terrain masking to deny acquisition. PUI shall incorporate all ASE to assist in early threat detection and application of appropriate tactics.

(3) Conduct a reactive attack against an EW threat. Execute appropriate evasive action in response to a previously un-located EW threat.

Performance Standards. Successfully operate and troubleshoot APR-39, APR-44, ALQ-144 and ALE-39 systems. Given a threat, load an appropriate ALE program. Conduct a preplanned attack against an EW threat.

Prerequisites. SEW-300.

Ordinance. 1 TOW plug, 1 captive HELLFIRE, 40 chaff and 20 flares.

External Syllabus Support. Manned EW range, TRTG support or remote radar emitter and LASER safe range if available.

Crew. WTO/PUI.

5. Advanced Night System Qualification (ANSQ)

a. Purpose. To develop proficiency during LLL operations.

b. General. At the completion of this stage, the PUI will be able to effectively employ the AH-1W during LLL conditions. Once complete in this stage, and designated NSQ (LLL) by the squadron commanding officer, the PUI may complete the remaining combat qualification NVD training under any light level conditions.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. Per the MAWTS-1 Course Catalog.

e. Flight and Simulator Event Training. (4 Sorties, 8.0 Hours/2 Simulator Periods, 3.0 Hours).

SANSQ-310 1.5 C WST/APT S NS

Goal. RS - Perform NVD and aircraft emergency procedures during LLL conditions.

Requirement

(1) Discuss crew comfort during LLL NVG operations and LLL scheduling restrictions. Discuss NVD effects encountered during LLL conditions and the use of the searchlight (covert/overt) during emergency procedures.

(2) Introduce pattern work at unlit and lit landing sites. Introduce NVD/aircraft emergency procedures at unlit and lit landing sites. Introduce inadvertent IMC (IIMC) procedures.

(3) Conduct 5 landings at an unlit site, 5 landings at a lit site and 5 autorotations. Conduct NVD and aircraft emergencies. Conduct IIMC procedures.

Performance Standards. Per NATOPS.

Prerequisites. NSQ (HLL).

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. CSI/PUI.

ANSQ-311 2.0 C,R 1 AH-1W A NS

Goal. FS - Perform NVD low work, pattern work and navigation during LLL conditions.

Requirement

(1) Discuss map preparation, checkpoint selection, cultural lighting, aircraft external lighting configurations and options.

(2) Introduce basic low work and pattern work at an unlit field or remote landing site free from artificial illumination. Introduce NVD navigation techniques by planning and navigating a 5 checkpoint route utilizing a 1:250,000 map.

(3) Conduct 5 landings at an unlit field or remote landing site free from artificial illumination.

Performance Standards. Navigate a route consisting of a minimum of 5 checkpoints and 50 nautical miles remaining oriented within 1 NM of flight planned route. Arrive at final checkpoint within 1 minute of assigned time. Utilize EGI for at least 2 legs of the route, if available.

Prerequisites. SANSQ-310.

Ordinance. N/A.

External Syllabus Support. Unlit field or remote landing site free from artificial illumination.

Crew. NSI/PUI.

ANSQ-312

2.0 C,R 2 AH-1W A NS

Goal. RS - Develop proficiency in tactical formation flight and TERF navigation during LLL conditions.

Requirement

(1) Discuss LLL formation flight considerations, hazards and night systems integration.

(2) Introduce tactical formation flight and navigation utilizing NVDs in low level, contour and NOE flight modes.

(3) Review TERF maneuvers in LLL conditions, crew comfort level and external aircraft lighting. Plan and navigate a route of at least 5 checkpoints utilizing a 1:50,000 map.

(4) Conduct TERF maneuvers and section formation flight in both the tactical lead and tactical wingman positions.

Performance Standards. Navigate a route utilizing a 1:50,000 map remaining oriented within 100 meters of planned route.

Prerequisites. ANSQ-311.

Ordinance. N/A.

External Syllabus Support. Approved TERF area and route.

Crew. NSI/PUI.

SANSQ-313

1.5 C WST/APT S NS

Goal. RS - Introduce ordnance delivery during LLL conditions.

Requirement

(1) Discuss rear seat penetration checklist procedures and techniques. Discuss LLL target acquisition difficulties, LLL ordnance delivery effects, LLL ordnance delivery scan techniques, HUD symbology with respect to target handoff techniques and declutter modes and SOP arming/dearming procedures.

(2) Introduce ordnance delivery utilizing running and diving fire and rear seat ordnance emergencies. Utilize both 5.00 inch and 2.75 inch rockets.

Performance Standards. Conduct arm/dearm procedures and penetration/depenetration checklists IAW TACSOP and local directives. Detect and engage both point and area targets utilizing 20mm (fixed and HSS modes) and rocket (running and pop-up) attacks. Achieve suppressive effects on assigned

targets during each engagement. Conduct proper actions in response to inflight ordnance emergencies.

Prerequisites. SANSQ-310.

Ordnance. N/A.

External Syllabus Support. N/A.

Crew. NSI/PUI.

ANSQ-314

2.0 C,R 2 AH-1W A NS

Goal. RS - Review ordnance delivery during LLL conditions.

Requirement

(1) Discuss 20mm ordnance nomenclature and rocket warhead/fuse combinations.

(2) Review ordnance delivery utilizing hover, running, diving fire, SOP arming/dearming procedures, LLL target acquisition difficulties, LLL ordnance delivery effects and scan techniques.

(3) Conduct a tactical mission during which both point and area targets are engaged. Conduct 20mm delivery utilizing fixed and HSS modes and running, pop-up and hover rocket attacks.

Performance Standards. Achieve suppressive effects on assigned targets during each engagement.

Prerequisites. SANSQ-313.

Ordnance. 500 rounds 20mm, 7 x 2.75 inch rockets, 4 x 5.00 inch rockets and turret mounted IR pointer.

External Syllabus Support. Live fire range and LASER safe range if available.

Crew. NSI/PUI.

ANSQ-315

2.0 C 2 AH-1W A NS

Goal. OS - Introduce night tactical helicopter escort during LLL conditions.

Requirement. PUI shall conduct EFL brief. Conduct APR/NATOPS/logbook review in preparation for NSQ (LLL) designation.

(1) Discuss TACSOP enroute threat reaction requirements, LLL escort techniques, principles and LLL LZ clearance/coverage techniques and procedures.

(2) Review a tactical assault support mission in a low to medium threat environment and fire support planning/integration of supporting arms ISO assault support operations.

(3) Conduct escort of assault support aircraft with at least 25 NM of attached flight. Conduct clearance of LZ for assault ingress. Utilize turret mounted IR pointer to alert crews to a simulated enemy position in the objective area. Integrate assault support weapons fires into the fire support plan.

Performance Standards. Per AH-1W TACMAN.

Prerequisites. ANSQ-311.

Ordinance. 1 TOW plug or captive HELLFIRE, 1 captive AIM-9 and turret mounted IR pointer.

External Syllabus Support. 2 or more assault helicopters. LASER safe range if available.

Crew. NSI/PUI.

6. Offensive Air Support (OAS)

a. Purpose. To develop the procedures and skill to tactically employ the aircraft during CAS and AI missions.

b. General. Upon completion of this stage the pilot will be proficient in the planning, briefing and execution aspects of CAS and AI missions. In addition, the pilot will be proficient in the operation and employment of all organic weapon systems. Other OAS missions (AR, SCAR) will be trained to in the Full Combat Qualification phase.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. Per the MAWTS-1 Course Catalog.

e. Flight and Simulator Event Training. (5 Sorties, 10.0 Hours).

OAS-320 2.0 C 2 AH-1W A

Goal. FS - Tactically employ the AH-1W in a low to medium threat environment during the conduct of an OAS mission.

Requirement. PUI shall brief the weaponeering portion of the OAS brief (AH-1W with operable VCR).

(1) Discuss ATO and ACEOI utilization and high, medium, and low threat levels.

(2) Introduce JMEMs use as part of mission planning, sensor performance prediction tools (TAWs/EOTDA/TISP) relative to mission planning and cockpit setup with regard to real world complement of mission essential equipment.

(3) Conduct a tactical mission in a low to medium threat environment, wearing body armor.

Performance Standards. Achieve delivery of 2.75 inch rockets or 20mm within 100 meters of target area from a range of 1500m or less during the initial engagement. Using NTS video, validate an effective HELLFIRE engagement of a point target.

Prerequisites. N/A.

Ordnance. 300 rounds 20mm, 7 x 2.75 inch rockets, 2 captive HELLFIRE and 60 flares.

External Syllabus Support. Live fire range and LASER safe range if available.

Crew. WTO/PUI.

OAS-321

2.0 C 2 AH-1W A

Goal. RS - Provide CAS to ground forces.

Requirement. PUI shall brief elevation analysis and Evasive Plan of Action (EPA) in support of the OAS brief (AH-1W with operable VCR).

(1) Introduce integration of FW CAS assets into objective area mechanics. IP shall develop and brief FAC(A) game plan in support of the OAS brief. Introduce elevation analysis and line of sight communication considerations as a part of mission planning. Introduce EPA.

(2) Review integration of attack helicopters into the ground scheme of maneuver and fire support coordination measures.

(3) Conduct CAS in a low to medium threat environment. Utilize PFPS to conduct elevation analysis and line of sight communication considerations.

Performance Standards. PUI shall control FW CAS assets IAW briefed FAC(A) game plan. Achieve the desired effects (as stipulated by the terminal controller) using 5.00 inch rockets or 20mm within 30 seconds of TOT during the initial engagement. Using NTS video, validate an effective PGM engagement of a point target assigned by the terminal controller within 30 seconds of TOT.

Prerequisites. N/A.

Ordnance. 300 rounds 20mm, 4 x 5.00 inch rockets, 1 TOW plug, 1 captive HELLFIRE, 20 chaff and 40 flares.

External Syllabus Support. Live fire range, 1 terminal controller, 2 FW CAS aircraft (may be simulated by IP) and LASER safe range if available.

Crew. WTO/PUI.

OAS-322

2.0 C 3 AH-1W A NS

Goal. RS - Introduce battlefield illumination in support of an OAS mission in a low threat environment.

Requirement. PUI shall brief route portion of OAS brief. PUI shall brief preplanned illumination template (AH-1W with operable EGI, MDL and VCR).

(1) Discuss wind and elevation effects on illumination, other sources of battlefield artificial illumination, use of EGI to enhance accuracy of illumination delivery, illumination types

and characteristics (both overt and covert) and use of the Mission Data Loader (MDL).

(2) Introduce illumination delivery profiles.

(3) Conduct illumination rocket delivery.

Performance Standards. Achievement of desired illumination effects (as stipulated in OAS brief) will be debriefed by flight lead. Using NTS video, validate an effective TOW engagement of a point target.

Prerequisites. N/A.

Ordinance. 7 x 2.75 inch illumination rockets, 1 TOW plug, 4 x LUU-2 illumination flares, 20 chaff and 40 flares.

External Syllabus Support. Live fire range and LASER safe range if available.

Crew. NSI/PUI.

OAS-323

2.0 C,R 2 AH-1W A NS

Goal. RS - Provide CAS to ground forces at night.

Requirement. PUI shall brief objective area portion of OAS brief (AH-1W equipped with operable VCR).

(1) Discuss MACCS agencies and integration, J-LASER terminology, IR pointer usage and friendly position marking techniques and procedures.

(2) Introduce integration of indirect fire assets into objective area mechanics.

(3) Conduct night CAS in a low to medium threat environment. PUI shall control indirect fire assets in support of terminal controller's objectives.

Performance Standards. Achieve the desired effects (as stipulated by the terminal controller) using 2.75 inch rockets or 20mm within 15 seconds of TOT during the initial engagement. Validate, using NTS video, an effective PGM engagement of a point target assigned by the terminal controller within 15 seconds of TOT.

Prerequisites. N/A.

Ordinance. 300 rounds 20mm, 7 x 2.75 inch rockets, 1 TOW plug or 1 captive HELLFIRE, 20 chaff, 40 flares and turret mounted IR pointer.

External Syllabus Support. Live fire range, LASER safe range, 1 terminal controller with LASER designator and 1 indirect fire asset (may be simulated by IP).

Crew. NSI/PUI.

OAS-324 2.0 C,R 2 AH-1W A NS

Goal. FS - Conduct a preplanned AI mission at night.

Requirement. PUI will conduct OAS brief. AH-1W equipped with operable EGI and VCR.

(1) Discuss PFPS radar terrain masking (RTM) options, BDA requirements and techniques, FARP operations and fuel planning.

(2) Review pre-mission planning with emphasis on threat analysis, JMEMs and weapon to target match. OAS brief shall include a FARP brief. Prepare a PFPS Radar Terrain Mask analysis of threat systems. Plan and execute a preplanned AI mission in a medium to high threat environment.

(3) Conduct FARP operation utilizing MWSS, CH-53 TBFDs or KC-130 RGR if available.

Performance Standards. Per AH-1W TACMAN.

Prerequisites. N/A.

Ordinance. 300 rounds 20mm, 3 x 2.75 inch rockets, 1 TOW plug, 1 live or captive HELLFIRE, 40 chaff and 20 flares.

External Syllabus Support. Live fire range, LASER safe range, 1 TRTG or remote radar emitter and 1 FARP asset if available.

Crew. NSI/PUI.

8. Forward Air Controller (Airborne) FAC(A)

a. Purpose. To qualify PUI as a FAC(A) in accordance with applicable directives.

b. General. At the completion of this stage, the PUI will have demonstrated a thorough knowledge of the FAC(A) procedures used to control FW aircraft and supporting arms under varied environmental and threat conditions. At the completion of this stage the PUI may be designated a FAC(A) by the squadron commanding officer and will be assigned the Tracking Code of QUAL-624. For pilots returning directly from FAC tours, this stage may be abbreviated by the commanding officer based upon the pilot's terminal controller experience level. An aircraft control for the purpose of defining requirements is a mission that ends with a "cleared hot," "continue dry," or "abort" issued from the terminal controller. Credit for each control will go to both pilots.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. EWTG developed FAC(A) syllabus.

e. Flight and Simulator Event Training. (4 Sorties, 8.0 Hours).

FAC-340 2.0 C, R 1 AH-1W A

Goal. OS - Introduce indirect fire supporting arms control.

Requirement. AH-1W with operable EGI and LDRS.

(1) Discuss capabilities and limitations of indirect fire assets, SEAD procedures and LASER call for fire procedures.

(2) Introduce call for fire procedures. PUI will control indirect fire assets.

(3) Conduct a minimum of 3 fire missions, 2 of which shall be adjust fire missions.

Performance Standards. Per applicable directives.

Prerequisites. N/A.

Ordnance. N/A.

External Syllabus Support. 1 indirect fire asset, live fire range and LASER safe range.

Crew. FAC(A) I/PUI.

FAC-341

2.0 C,R 2 AH-1W A

Goal. OS - Introduce control of FW aircraft.

Requirement. AH-1W with operable LDRS.

(1) Discuss FW aircraft ordnance capabilities and limitations, crew coordination, task shedding and task sharing in the FAC(A) arena.

(2) Introduce integration of FW CAS assets into objective area mechanics and communication and control procedures. PUI will control FW CAS assets.

(3) Conduct a minimum of 4 controls.

Performance Standards. Per applicable directives.

Prerequisites. N/A.

Ordnance. 7 x 2.75 inch (WP) rockets.

External Syllabus Support. 2 FW CAS aircraft with ordnance, live fire range and LASER safe range.

Crew. FAC(A) I/PUI.

FAC-342

2.0 C,R 2 AH-1W A NS

Goal. OS - Introduce control of FW aircraft at night.

Requirement. AH-1W with operable LDRS. PUI will brief a FAC(A) game plan.

(1) Discuss FW aircraft sensor capabilities and limitations.

(2) Review integration of FW CAS assets into objective area mechanics, communication and control procedures, crew coordination, task shedding and task sharing in the FAC(A) arena. Pilot will control FW CAS assets.

(3) Conduct a minimum of 4 controls.

Performance Standards. Per applicable directives.

Prerequisites. N/A.

Ordnance. 7 x 2.75 inch (WP) rockets and turret mounted IR pointer.

External Syllabus Support. 2 FW CAS aircraft with ordnance, live fire range and LASER safe range.

Crew. NSI and FAC(A) I/PUI.

FAC-343

2.0 C,R 2 AH-1W (NS)

Goal. OS - Introduce supporting arms consolidation.

Requirement. AH-1W with operable LDRS. Pilot will brief a FAC(A) game plan.

(1) Discuss fire support planning documents (target list worksheet, scheduling worksheet) weapon-to-target match.

(2) Review integration of multiple supporting arms assets into objective area mechanics and SEAD procedures. PUI will coordinate SEAD in support of FW target engagement.

(3) Conduct a minimum of 4 FW controls.

Performance Standards. Per applicable directives.

Prerequisites. N/A.

Ordnance. 7 x 2.75 inch (WP) rockets.

External Syllabus Support. 2 FW CAS aircraft with ordnance, 1 indirect fire asset OR 1 section of RW aircraft separate from flight, live fire range and LASER safe range.

Crew. FAC(A) I (NSI)/PUI.

134. CORE SKILL PLUS PHASE

1. Purpose. To certify the PUI in large scale integrated mission events, events having unique mission taskings, events having a low probability of execution in combat, or relatively high-risk events.

2. General

a. Completion of the RWDACM stage meets the requirements for the PUI to be RWDACM qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as RWDACM qualified shall be placed in the NATOPS jacket, APR and a Tracking Code of QUAL-618 shall be logged.

b. Completion of the FWDACM stage meets the requirements for the PUI to be FWDACM qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as FWDACM qualified shall be placed in the NATOPS jacket, APR and a Tracking Code of QUAL-619 shall be logged.

c. Completion of all FCLP/CQ events 430-434 meets the requirement for the PUI to be CQ. At the discretion of the squadron commanding officer a letter

assigning the PUI as CQ shall be placed in the NATOPS jacket and APR. Tracking Codes of QUAL-615 and QUAL-616 shall be logged. Completion of the CQ-435 meets the requirement for the PUI to be unaided CQ. At the discretion of the squadron commanding officer a letter assigning the PUI as unaided CQ shall be placed in the NATOPS jacket, APR and a Tracking Code of QUAL-617 shall be logged.

3. Offensive Air Support (OAS)

- a. Purpose. To refine proficiency in OAS missions.
- b. General. At the completion of this stage, the PUI will have demonstrated the ability to integrate FW and RW aircraft in the execution of OAS missions under varied environmental and threat conditions. The PUI will be introduced to division tactics.
- c. Crew Requirements. As listed at the end of each event.
- d. Ground/Academic Training. Per the MAWTS-1 Course Catalog.
- e. Flight and Simulator Event Training. (6 Sorties, 12.0 Hours).

OAS-400 2.0 C 2 AH-1W A (NS)

Goal. OS - Demonstrate and introduce AIC or GCI intercept of a surface threat.

Requirement

(1) Discuss radar/fire control capabilities of friendly and aggressor platforms, standard intercept controller terminology, weaponing, EDATF procedures and alert status.

(2) Demonstrate and introduce AIC/GCI procedures.

(3) Conduct detailed coordination with radar controller and a minimum of 2 successful intercepts.

Performance Standards. Intercepts will terminate in either accurate target identification or simulated engagement.

Prerequisites. N/A.

Ordinance. Captive PGM.

External Syllabus Support. AIC/GCI platform, controller and a surface aggressor.

Crew. WTO (NSI) /PUI.

OAS-401 2.0 C,R 3+ AH-1W A (NS)

Goal. OS - Refine armed escort responsibilities during assault support operations.

Requirement

(1) Discuss integration of fires in the objective area.

(2) Plan, brief and lead an armed escort flight under a medium to high threat environment. Emphasize tactical employment of ordnance enroute and in the objective area, lookout doctrine, integration of fires, escort flight responsibilities, terminal area considerations, weaponeering and assault gunner procedures. Integrate all available supporting assets. Develop and execute a fire support plan during the initial assault wave. This event may satisfy the requirements for events of the Division Leader Under Training (DLUT) syllabus.

Performance Standards. Correctly react to 1 or more simulated enroute threats to the assault flight per TACSOP.

Prerequisites. DESG-631.

Ordnance. 300 rounds 20mm, 4 x 5.00 inch rockets, 1 captive PGM, 1 captive AIM-9, 40 chaff, 20 flares.

External Syllabus Support. 2 or more assault helicopters. Live fire range.

Crew. Div Leader (NSI)/PUI.

OAS-402

2.0 C 3+ AH-1W A (NS)

Goal. OS - Conduct an Armed Reconnaissance mission.

Requirement

(1) Discuss threat radar planning considerations with the emphasis on mission planning systems, radar terrain masking and radar resolution cell.

(2) Plan, brief and lead an armed reconnaissance mission in a medium to high threat environment. Emphasize flight leadership, terminal area target information collection and reporting, detailed objective area planning, coordinated weapons employment, ROE and supporting arms integration (if available). This event may satisfy the requirements for events of the DLUT syllabus.

Performance Standards. PUI will provide accurate and timely reports during conduct of the mission. PUI will locate and effectively engage a minimum of 1 target IAW briefed ROE.

Prerequisites. DESG-631.

Ordnance. 300 rounds 20mm, 7 x 2.75 inch rockets, 1 captive HELLFIRE/TOW plug, 40 chaff and 20 flares.

External Syllabus Support. Live fire range and LASER safe range.

Crew. Div Leader (NSI)/PUI.

OAS-403

2.0 C,R 2 AH-1W A NS

Goal. OS - Conduct a Strike Coordination and Reconnaissance (SCAR) mission.

Requirement

(1) Discuss MACCS integration for deep battle operations, EA-6B capabilities/limitations and the IPB process.

(2) Plan, brief and lead a SCAR mission in a medium threat environment. Emphasize target acquisition and target reporting. Coordinate available air assets to prosecute approved targets.

Performance Standards. PUI will locate a minimum of 2 targets and coordinate the engagement of those targets by other OAS assets.

Prerequisites. DESG-631.

Ordinance. 300 rounds 20mm, 7 x 2.75 inch rockets, 1 TOW plug, 1 captive HELLFIRE, 40 chaff, 20 flares and turret mounted IR pointer.

External Syllabus Support. 2 OAS aircraft, live fire range and LASER safe range if available.

Crew. NSI/PUI.

OAS-404

2.0 C,R 2 AH-1W/WST A/S

Goal. OS - Introduce OAS in an urban environment.

Requirement

(1) Discuss aircraft flight profiles, weapon selection and ROE.

(2) PUI will coordinate, plan and conduct OAS brief. Develop a detailed fire support plan with ground force integration. Emphasize detailed coordination/planning for urban CAS, fire support coordination, GCE scheme of maneuver, targeting and marking considerations.

(3) Conduct urban navigation using non-standard maps (if available). PUI will receive, coordinate and execute a minimum of 1 CAS mission.

Performance Standards. PUI will remain oriented within 1 city block for navigation.

Prerequisites. OAS-321.

Ordinance. 1 TOW plug or captive HELLFIRE.

External Syllabus Support. 1 FAC qualified ground controller with appropriate marking devices, suitable urban environment or MOUT facility and LASER simulator.

Crew. WTO/PUI.

OAS-405

2.0 C, R 2 AH-1W A NS

Goal. OS - Introduce OAS in an urban environment at night.

Requirement

(1) Discuss aircraft flight profiles, weapon selection, ROE, Urban Grid Target System, IR CAS procedures, escort and urban heliborne assault considerations.

(2) Conduct urban navigation using non-standard maps (if available). Emphasize optimal use of aircraft systems in the conduct of a MOUT mission. PUI will receive, coordinate and execute a minimum of 1 CAS mission.

Performance Standards. PUI will remain oriented within 1 city block for navigation.

Prerequisites. NSQ (LLL) complete and OAS-404.

Ordinance. 1 captive TOW and/or captive HELLFIRE.

External Syllabus Support. 1 FAC qualified ground controller with appropriate marking devices, suitable urban environment or MOUT facility and LASER simulator.

Crew. NSI/PUI.

4. Rotary Wing DACM (RWDACM)

a. Purpose. To demonstrate and introduce RWDACM and qualify the PUI as RWDACM complete.

b. General. At the completion of this stage, the pilot will be proficient in the conduct of the principles of RWDACM and have a thorough knowledge of weapons employment, aircraft control and threat tactics of RW adversaries.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. Per the MAWTS-1 Course Catalog.

d. Flight and Simulator Event Training. (4 Sorties, 8.0 Hours).

DACM-410 2.0 C 2 AH-1W A

Goal. RS - Conduct shadow gunnery.

Requirement

(1) Discuss weapon systems, lead distance and angles and air-to-air gunnery techniques.

(2) Introduce ordnance delivery in a variety of aspect angles versus moving targets.

Performance Standards. Conduct shadow gunnery. Achieve impacts on assigned target (shadow) at least once during sortie.

Prerequisites. N/A.

Ordinance. 400 rounds 20mm.

External Syllabus Support. Live fire range.

Crew. WTO/PUI.

DACM-411

2.0 C 1 AH-1W A

Goal. RS - Introduce 1 v 1 RWDACM.

Requirement

(1) Discuss concepts of energy maneuverability and specific excess power and their applicability to tactical considerations, concepts of the high and low yo-yo and the appropriate counter tactics to these maneuvers, weapons employment rules of thumb, range estimation techniques, line number setups, F-Pole, DACM training rules, crew coordination, aircraft control and flight leadership.

(2) Introduce capabilities/limitations and weapons envelopes of adversary RW aircraft.

(3) Conduct one complete line number sequence (from both friendly and adversary roles). Maintain aircraft control within NATOPS limitations.

Performance Standards. Execute proper reactions to RW threat attacks.

Prerequisites. N/A.

Ordinance. 1 TOW plug, 1 captive AIM-9, 60 flares and TACTS pod (optional).

External Syllabus Support. One adversary helicopter and appropriate air-to-air training area.

Crew. DACMI/PUI.

DACM-412

2.0 C 2 AH-1W A

Goal. RS - Introduce 2 v 1 RWDACM.

Requirement

(1) Discuss: roles and responsibilities of free and engaged; weapons employment rules of thumb; range estimation techniques, line number setups, DACM training rules, crew coordination, aircraft control, flight leadership, section tactics, and the concept of the weave.

(2) Review capabilities/limitations and weapons envelopes of adversary RW aircraft. Review the concepts of energy maneuverability and specific excess power and their applicability to tactical considerations.

(3) Conduct one complete line number sequence (from both tactical lead and tactical wingman positions).

Performance Standards. Maintain aircraft control within NATOPS limitations. Execute proper reactions to RW threat attacks.

Prerequisites. DACM-411.

Ordinance. 1 TOW plug, 1 captive AIM-9, 60 flares and TACTS pod (optional).

External Syllabus Support. One adversary helicopter and appropriate air-to-air training area.

Crew. DACMI/PUI.

DACM-413 2.0 C,R 2 AH-1W A

Goal. RS - Review 1 v 1 and 2 v 1 RWDACM.

Requirement

(1) Discuss crew coordination, aircraft control, flight leadership, section tactics, roles and responsibilities of free and engaged aircraft and the concept of the weave.

(2) Review the concepts covered during DACM-411 and DACM-412.

(3) Conduct one complete line number sequence (from both tactical lead and tactical wingman positions). Maintain aircraft control within NATOPS limitations.

Performance Standards. Execute proper reactions to RW threat attacks.

Prerequisites. DACM-412.

Ordinance. 1 TOW plug, 1 captive AIM-9, 60 flares and TACTS pod (optional).

External Syllabus Support. One adversary helicopter and appropriate air-to-air training area.

Crew. DACMI/PUI.

5. Fixed-Wing Defensive Air Combat Tactics (FWDACM)

a. Purpose. Demonstrate and introduce FWDACM in order to counter enemy offensive air capabilities.

b. General. At the completion of this stage, the PUI will be proficient in the conduct of the principles of FWDACM and have a thorough knowledge of weapons employment, aircraft control and threat tactics of FW adversaries.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. Per the MAWTS-1 Course Catalog.

e. Flight and Simulator Event Training. (2 Sorties, 4.0 Hours).

DACM-414 2.0 C,R 1 AH-1W A

Goal. RS - Perform 1 v 1 DACM against a FW adversary.

Requirement. Demonstrate and introduce RW v FW DACM.

(1) Discuss FW capabilities/limitations, weapon envelopes and tactics of adversary FW aircraft, tactical advantages derived from Ps/Em charts which demonstrate the capabilities of the RW

platform to be exploited when facing a FW adversary. Discuss procedures to counter the threat; FW air-to-air weapons considerations to include range estimation, lead requirements, TOF, RADAR/fire control capabilities of friendly and aggressor platforms, standard intercept controller terminology, weaponeering, ATF defense-in-depth plans, DACM training rules and FW DACM line number set-up and execution.

(2) Conduct a minimum of 1 line number sequence. Emphasize weapons employment, aircraft control, and limitations.

Performance Standards. Execute proper switchology for AIM-9 employment by simulating a missile launch after achieving an in-range target seeker lock. Execute proper reactions to FW threat attacks.

Prerequisites. N/A.

Ordinance. 1 captive AIM-9, 60 flares and TACTS pod (optional).

External Syllabus Support. 1 FW aggressor aircraft. Air-to-air range (TACTS range).

Crew. DACMI/PUI.

DACM-416

2.0 C,R 2 AH-1W A

Goal. RS - Perform 2 v 2 DACM against FW adversaries.

Requirement

(1) Discuss FW capabilities/limitations, weapons envelopes and tactics of adversary FW aircraft, Ps/EM of threat/friendly aircraft and the related tactical considerations, procedures to counter the threat, DACM training rules and FW DACM line number set-up and execution.

(2) Demonstrate and introduce 2 v 2 DACM v FW aircraft. Emphasize weapons employment, limitations and aircraft/section control, section awareness and flight leadership as it applies to DACM. Complete a minimum of 1 line number sequence as lead and as wingman.

Performance Standards. Execute proper switchology for AIM-9 employment by simulating a missile launch after achieving an in-range target seeker lock. Execute proper reactions to FW threat attacks.

Prerequisites. DACM-414.

Ordinance. Captive AIM-9, 60 flares and TACTS pod (optional).

External Syllabus Support. 2 FW aggressor aircraft. Air-to-air range (TACTS range).

Crew. DACMI/PUI.

6. Nuclear, Biological, and Chemical warfare (NBC)

- a. Purpose. Introduce the pilot to operations while wearing the aviator's NBC protective mask (AR-5).
- b. General. This event is designed to expand the capabilities of the aircrew in NBC operations.
- c. Crew requirements. As listed at the end of the event.
- d. Ground/academic training. Review appropriate section of AH-1W TACMAN on the AR-5 NBC protective mask prior to flight. The pilot will complete the AR-5 familiarization lecture and aircraft egress with mask. Discuss capabilities and disadvantages of the AR-5 to include AR-5 emergency procedures. Review all MOPP conditions.
- e. Flight and Simulator Event Training. (1 Sortie, 1.0 Hour).

NBC-420 1.0 C,R 1 AH-1W A/S

Goal. RS - AR-5 protective mask introduction.

Requirements. Introduce wear of the AR-5 protective mask while conducting FAM maneuvers.

Performance standards. Per AH-1W TACMAN.

Prerequisites. N/A.

Ordinance. N/A.

External syllabus support. N/A.

Crew. BIP(CSI)/PUI.

7. Field Carrier Landing Practice (FCLP)

- a. Purpose. To introduce flight operations from a carrier deck or air capable ship during the day and at night using the simulator and by introducing day and night FCLPs.
- b. General. The IP will Demonstrate/introduce proper communication procedures, patterns and aviation operations in the shipboard environment. Refer to appropriate NATOPS and LHA/LPH/LHD NATOPS manuals for shipboard operations.
- c. Crew Requirements. As listed at the end of each event.
- d. Ground/Academic Training. CQ Stage lectures (Squadron).
- e. Flight and Simulator Event Training. (2 Sorties, 2.0 Hours/1 Simulator Period, 1.5 Hours).

SFCLP-430 1.5 C WST S

Goal. OS - Introduce day, night and NVD shipboard operations.

Requirement

(1) Discuss the shipboard environment/procedures, EPs, Delta, Alpha, and Charlie patterns, shipboard instrument procedures, including TACAN, Carrier Controlled Approaches (CCA), marshals, lost comm procedures, sight picture and landings to an L-Class amphibious ship.

(2) Demonstrate/introduce patterns, approaches, visual signals, communications and landings to an L-Class amphibious ship.

(3) Conduct a minimum of 5 CQ landings of each type to an L-Class Amphibious ship.

Performance Standards. Per the AH-1W NATOPS and shipboard NATOPS manuals.

Prerequisites. N/A.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP/PUI.

FCLP-431

1.0 C,R 1 AH-1W A

Goal. OS - Introduce day FCLP operations.

Requirement

(1) Discuss air capable ships, shipboard specific crew coordination, LSE signals, emergency and ditching procedures, wind limitation charts, shipboard terminology, patterns, entry/exit procedures, rotor brake start, HERO conditions and shipboard airspace.

(2) Demonstrate/introduce patterns, sight picture and landings to a FCLP deck.

(3) Conduct a rotor brake start and a minimum of 5 FCLP landings.

(4) Review shipboard EPs and patterns.

Performance Standards. Per the AH-1W NATOPS and shipboard NATOPS manuals.

Prerequisites. N/A.

Ordinance. N/A.

External Syllabus Support. FCLP pad.

Crew. BIP/PUI.

FCLP-432 1.0 C,R 1 AH-1W A NS

Goal. OS - Introduce night and NVD FCLP operations.

Requirement. Discuss instrument scan, night/NVD patterns, shipboard crew coordination, comfort level, NVD failures and emergency procedures, lighting considerations, vertigo and shipboard instrument procedures. Demonstrate/introduce night aided/unaided FCLP patterns, approaches and landings. Review communication procedures and visual signals. A minimum of 5 unaided and 5 aided landings will be conducted.

Performance Standards. Per the AH-1W NATOPS and shipboard NATOPS manuals.

Prerequisites. FCLP-431.

Ordinance. N/A.

External Syllabus Support. Lighted/NVD compatible FCLP pad.

Crew. NSI/PUI.

7. Carrier Qualification (CQ)

a. Purpose. To introduce day and night flight operations from a carrier deck or air capable ship.

b. General. Per applicable directives, IP will emphasize proper communication procedures, patterns, and aviation operations in the shipboard environment. Refer to appropriate NATOPS and appropriate shipboard NATOPS Manuals for carrier operations. PUI shall complete the FCLP stage prior to commencing this stage.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. CQ stage lectures (Squadron).

e. Flight and Simulator Event Training. (3 Sorties, 3.0 Hours).

CQ-433 1.0 C,R 1 AH-1W A

Goal. OS - Conduct day shipboard landing qualification.

Requirement

(1) Discuss lost communication procedures and emergency procedures as related to shipboard environment.

(2) Introduce day shipboard operations.

(3) Review shipboard instrument procedures and Delta, Alpha and Charlie patterns.

(4) Conduct a minimum of 5 day shipboard landings. Conduct 1 precision and 1 non-precision approach, if available. Conduct shipboard refueling, if available.

Performance Standards. Per AH-1W NATOPS.

Prerequisites. FCLP-431 IAW OPNAV 3710.7.

Ordnance. N/A.

External Syllabus Support. Landing platform afloat.

Crew. BIP/PUI.

CQ-434

1.0 C,R 1 AH-1W A NS

Goal. OS - Conduct NVD shipboard landing qualification.

Requirement

- (1) Discuss ship airspace and shipboard ordnance operations.
- (2) Introduce NVD shipboard operations.
- (3) Review shipboard instrument procedures and Delta, Alpha and Charlie patterns.
- (4) Conduct a minimum of 5 NVD shipboard landings. Conduct 1 precision and 1 non-precision approach, if available. Conduct shipboard refueling, if available.

Performance Standards. Per AH-1W NATOPS.

Prerequisites. CQ-433; FCLP-432 IAW OPNAV 3710.7.

Ordnance. N/A.

External Syllabus Support. Landing platform afloat.

Crew. NSI/PUI.

CQ-435

1.0 C,R 1 AH-1W A N

Goal. OS - Night unaided CQ introduction.

Requirement

- (1) Discuss shipboard lighting and wind limitations.
- (2) Introduce night shipboard operations.
- (3) Review shipboard instrument procedures and Alpha, Delta, Charlie patterns.
- (4) Conduct a minimum of 5 night shipboard landings. Conduct 1 precision and 1 non-precision approach if available. Conduct shipboard refueling if available.

Performance Standards. Per NATOPS.

Prerequisites. CQ-433.

Ordnance. N/A.

External Syllabus Support. Landing platform afloat.

Crew. NSI/PUI.

140. INSTRUCTOR UNDER TRAINING FLIGHT/SIMULATOR/EVENT PERFORMANCE REQUIREMENTS

1. Purpose. To develop standardized IPs with the ability to teach flight skills requisite to qualification as a Core Plus Phase qualified pilot. AHC designation is required prior to starting this stage.

2. General. Upon completion of this phase of training the IUT may be designated a BIP, TERFI and WTO.

a. Completion of the BIP stage meets the requirements for the PUI to be designated a BIP. At the discretion of the squadron commanding officer a letter designating the IUT as a BIP shall be placed in the NATOPS jacket and APR and a Tracking Code of IDSG-680 shall be logged.

b. Completion of the TERFI stage meets the requirements for the PUI to be designated a TERFI. At the discretion of the squadron commanding officer a letter designating the IUT as a TERFI shall be placed in the NATOPS jacket and APR and a Tracking Code of IDSG-681 shall be logged.

c. Completion of the WTO stage meets the requirements for the IUT to be designated a WTO. At the discretion of the squadron commanding officer a letter designating the IUT as a WTO shall be placed in the NATOPS jacket and APR and a Tracking Code of IDSG-682 shall be logged.

d. All stages will be flown in the order listed. Prior to the completion of each stage of training, the IUT will be required to present a class from an applicable MAWTS-1 ASP lecture. Emphasis will be placed on error analysis, error correction, instructional technique, briefing and debriefing procedures.

3. BIP

a. Purpose. To qualify the IUT to instruct basic FAM, INST, CQ and FORM.

b. General. IUT must be CQ complete to begin this stage of training. CQ qualification is not required for the FRS BIP syllabus.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. Per MAWTS-1 Course Catalog.

e. Flight and Simulator Event Training. (4 Sorties, 8.0 Hours/1 Simulator period, 1.5 Hours)

SBIP-500 1.5 C WST/APT S

Goal. OS - Emergency procedures standardization.

Requirement

(1) Discuss cockpit indications of all emergencies and this Manual.

(2) Review SCSIX-180 stressing systems failures and emergencies. The IUT will demonstrate a thorough knowledge of aircraft systems and emergency procedures. Emphasize CRM during emergency procedures execution.

Performance Standards. IUT will correctly identify all emergency procedures and apply appropriate immediate action per NATOPS.

Prerequisites. DESG-631.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP(CSI)/IUT.

BIP-501

2.0 C 1 AH-1W A (N)

Goal. FS - Review all FAM stage maneuvers and FCLPs with emphasis on standardization IAW the AH-1W NATOPS, MDG and LHA/LHD NATOPS.

Requirement

(1) Discuss instructional techniques.

(2) Demonstrate knowledge of preflight, local course rules and techniques of instruction for all familiarization maneuvers and shipboard operations. Emphasize shipboard approaches, patterns, landings, standardized maneuver descriptions, system failures and emergencies. IUT will perform all FAM stage maneuvers. IUT will perform a minimum of 5 FCLPs.

Performance Standards. In performance of the maneuvers and FCLPs the IUT will be able to discuss proper parameters and techniques.

Prerequisites. DESG-631.

Ordinance. N/A.

External Syllabus Support. FCLP pad.

Crew. BIP (NSI)/IUT.

BIP-502

2.0 C,R 1 AH-1W A (N)

Goal. FS - IUT will demonstrate the ability to accurately identify and correct PUI BAW errors, tendencies and procedural errors during FAM maneuvers.

Requirement. This flight shall be conducted at night if BIP-501 was flown in daylight.

(1) Discuss OPNAVINST 3710.7. IP will act as the PUI.

(2) Emphasize error detection, correction of airwork and procedure deficiencies.

Performance Standards. IUT will satisfactorily demonstrate the ability to recognize, analyze and correct all errors through demonstration or verbal commands.

Prerequisites. DESG-631.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP (NSI)/IUT.

BIP-503

2.0 C,R 1 AH-1W A/S (N)

Goal. FS - IUT will demonstrate the ability to instruct in the instrument flight regime.

Requirement

(1) Discuss applicable instrument publications and squadron flight operations SOP.

(2) IP will act as PUI. IP will provide the IUT with an actual or notional instrument flight plan with intentional errors. A portion of the sortie will be conducted under positive control. IUT will satisfactorily demonstrate the ability to execute, analyze and correct all standard instrument maneuvers under actual or simulated IFR conditions.

(3) Review IFR flight planning and enroute procedures. Conduct a minimum of 1 instrument approach.

Performance Standards. IUT will correctly identify all errors in a flight plan provided by the IP. IUT will ensure that the PUI maintains established BAW parameters.

Prerequisites. DESG-631.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP (NSI)/IUT.

BIP-504

2.0 C,R 2 AH-1W A

Goal. FS - IUT will demonstrate the ability to instruct formation flight.

Requirement

(1) Discuss instructor briefing and debriefing techniques.

(2) The IUT will brief and lead the flight. The IP will act as the PUI for a portion of the parade and tactical sequences. The IUT will demonstrate all formation stage maneuvers with emphasis on instructional technique, accurate maneuver description, formation signals and parade/tactical formation maneuvering.

Performance Standards. IUT will properly perform all briefed maneuvers from both lead and wingman position IAW the AH-1W NATOPS, TACMAN and MDG. IUT will be able to identify and correct abnormal parameters performed by the IP/PUI.

Prerequisites. DESG-631.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. BIP and Sec Leader/IUT.

4. TERFI

a. Purpose. To qualify the IUT as a TERF instructor.

b. General. IUT will be designated BIP and section leader prior to beginning TERFI training. IUT will demonstrate the ability to utilize MPS and appropriate tactical navigation systems. Upon completion of the TERF IUT stage, the IUT may be designated a TERFI by the squadron commander.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. Per MAWTS-1 Course Catalog.

e. Flight and Simulator Event Training. (2 Sorties, 4.0 Hours).

TERF-510 2.0 C 1 AH-1W A

Goal. OS - Conduct all TERF maneuvers with emphasis on instructional technique.

Requirement

(1) Discuss crew coordination, comfort level, map preparation and low altitude emergencies emphasizing single engine operation.

(2) Demonstrate all TERF maneuvers.

(3) Review all TERF maneuvers, tactical decisions to fly TERF and threat considerations that influence TERF profiles.

Performance Standards. Per the AH-1W NATOPS, MDG, and AH-1W TACMAN.

Prerequisites. IDSG-680 and DESG-649.

Ordinance. N/A.

External Syllabus Support. Approved TERF area.

Crew. TERFI/IUT.

TERF-511 2.0 C,R 2 AH-1W A

Goal. OS - IUT will conduct TERF navigation in low level, contour and NOE profiles with emphasis on instructional technique.

Requirement. IUT will plan, brief and lead the flight. IUT will fly from the seat opposite of that flown during TERF-510.

(1) Discuss TERF navigation techniques and procedures, CRM, comfort level and the illusions of terrain flight.

(2) Demonstrate the use of the EGI system as a back-up NAVAID. The IUT will brief a TERF route with a minimum of 5 checkpoints. Emphasis will be on tactical use of terrain to navigate to a specific objective area, masking and unmasking profiles.

(3) Review boundary features including lateral limits and intermediate checkpoints.

Performance Standards. The IUT will navigate in low level, contour and NOE profile, remaining oriented within 200 meters, arriving at the final checkpoint within 1 minute of the planned time.

Prerequisites. IDSG-680 and DESG-649.

Ordinance. N/A.

External Syllabus Support. Approved TERF area route.

Crew. TERFI/IUT.

5. WTO

a. Purpose. To qualify the IUT as a WTO.

b. General. IUT will be designated a TERFI prior to beginning WTO training. The WTO is qualified to instruct all phases of flight except those requiring FAC(A)I, NSFI, NSI, DACMI, or WTI qualifications. As such, the WTO shall demonstrate sound knowledge of all aircraft weapon systems, threat systems, current tactics, as well as all TTPs within the Core Plus Phase.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. Per MAWTS-1 Course Catalog.

e. Flight and Simulator Event Training. (2 Sorties, 4.0 Hours/2 Simulator periods, 3.0 Hours).

SWTO-520 1.5 C WST/APT S

Goal. FS - Review rear seat ordnance delivery with emphasis on CRM during weapons delivery missions.

Requirement. IP will act as PUI.

(1) Discuss AH-1W TACMAN rocket delivery charts, HUD reticles, rocket and 20mm capabilities/limitations/selection and malfunctions. Discuss and utilize the AIM-9 weapon system.

(2) Demonstrate instructional techniques while conducting an air-to-ground mission employing all delivery techniques. Emphasize a thorough knowledge of mixed ordnance delivery, weaponeering, error analysis and correction.

(3) Conduct standardized weapons employment crew coordination per the AH-1W pocket checklist and squadron SOPs.

Performance Standards. Per AH-1W NATOPS and TACMAN.

Prerequisites. IDSG-681.

Ordnance. N/A.

External Syllabus Support. N/A.

Crew. WTO/IUT.

SWTO-521

1.5 C, R WST/APT S

Goal. RS - Review front seat ordnance delivery and attack patterns with emphasis on CRM during weapons delivery missions.

Requirement

(1) Discuss PGM employment charts and tables as well as PGM capabilities/limitations/selection and malfunctions. Receive, coordinate and execute a minimum of 2 CAS missions.

(2) Demonstrate instructional techniques and a thorough understanding of AH-1W weapon systems while performing TOW and HELLFIRE delivery. Emphasize PGM coordination and weaponeering.

Performance Standards. Employ instructional techniques to correct weapons delivery errors. Identify and correct ordnance systems malfunctions and switchology problems.

Prerequisites. IDSG-681.

Ordnance. N/A.

External Syllabus Support. N/A.

Crew. WTO/PUI.

WTO-522

2.0 C 2 AH-1W A

Goal. FS - Repeat SWTO-520 in the aircraft with emphasis on instructional techniques.

Requirement

(1) Discuss standardized terminology and instructional techniques.

(2) Demonstrate instructional techniques in the employment of all weapon systems during a BCWD flight. Employ hover/running/diving and pop-up fire while conducting various attack patterns. Emphasize safety considerations and ordnance range procedures. IUT will have a thorough understanding of all weapon systems, switchology, system malfunctions and failures.

Performance Standards. The IUT will ensure that all ordnance is delivered per published range regulations and squadron SOPs. Employ instructional techniques to correct weapons delivery errors. Identify and correct ordnance systems malfunctions and switchology problems.

Prerequisites. IDSG-681.

Ordnance. 300 rounds 20mm, 7 x 2.75 inch rockets, 1 TOW plug, 1 captive HELLFIRE, 1 captive AIM-9, 10 chaff and 20 flares.

External Syllabus Support. Live fire range and LASER safe range if available.

Crew. WTO/IUT.

WTO-523

2.0 C,R 2 AH-1W A

Goal. RS - Repeat SWTO-521 in the aircraft with emphasis on instructional techniques and tactics standardization.

Requirement

(1) Demonstrate knowledge and instructional techniques in all weapons training areas including the MACCS, FSCMs, escort, electronic warfare, intercept procedures, PGM delivery, weaponeering and crew coordination. The IP will act as the PUI.

(2) Review terrain flight ordnance delivery techniques, rear seat instructional techniques with the NTS with emphasis on systems malfunctions/failures. The IUT will plan, brief and lead the flight under a tactical scenario. The IUT will ensure that all ordnance is delivered per published range regulations and squadron SOPs.

Performance Standards. The IUT will properly identify and correct weapons switchology errors initiated by the IP.

Prerequisites. IDSG-681.

Ordnance. 300 rounds 20mm, 4 x 2.75 inch rockets, 1 TOW plug or captive HELLFIRE, 10 chaff and 20 flares.

External Syllabus Support. Live fire range and LASER safe range if available.

Crew. WTO/IUT.

150. REQUIREMENTS, QUALIFICATIONS, DESIGNATIONS, INSTRUCTOR DESIGNATIONS
(RQRD, QUAL, DESG, IDSG)

1. Purpose. To provide a vehicle for Tracking Codes associated with qualifications and designations.

2. General

a. "E"-coded sorties are evaluation sorties. "E"-coded sorties in the 600-level phase may be logged in conjunction with any sortie that completes that stage. For example, DESG-659 may be flown in conjunction with 401 or 402. CRP is not awarded for these 600-level sorties. However, CRP credit may be obtained by logging the appropriate training code(s) in the 200-400 level syllabus. Once the flight to attain the qualification/designation is complete, a letter from the squadron commanding officer awarding the qualification/designation shall be placed in the NATOPS and APR before that qualification/designation can be utilized.

b. After the commanding officer has designated the PUI in writing as a section lead or division lead, the operations department shall log DESG-649 (section lead) and DESG-659 (division lead) respectively.

3. Ground Training. Per applicable directives.

<u>RQRD-600</u>	<u>1.5</u>	<u>E 1 (AH-1W) A/S (N)</u>
<u>Goal</u> . RS - Conduct an annual instrument check.		
<u>Requirement</u> . Successfully conduct the check IAW applicable directives.		
<u>Performance Standards</u> . Per the NATOPS and NATOPS Instrument Flight Manual (NIFM).		
<u>Prerequisites</u> . IAW OPNAVINST 3710.		
<u>Ordinance</u> . N/A.		
<u>External Syllabus Support</u> . N/A.		
<u>Crew</u> . BIP-IFBM (CSI)/PUI.		
<u>RQRD-601</u>	<u>1.5</u>	<u>E 1 AH-1W A (N) (NS)</u>
<u>Goal</u> . RS - Conduct an annual NATOPS check.		
<u>Requirement</u> . Successfully conduct the evaluation IAW applicable directives. Recommend that a portion of the NATOPS check be flown at night.		
<u>Performance Standards</u> . Per NATOPS.		
<u>Prerequisites</u> . RQRD-602.		
<u>Ordinance</u> . N/A.		
<u>External Syllabus Support</u> . N/A.		
<u>Crew</u> . NI, ANI (NSI reqr if PUI is not NSQ)/PUI.		
<u>RQRD-602</u>	<u>1.5</u>	<u>E C, R WST/APT S</u>
<u>Goal</u> . Review aircraft emergency procedures and systems failures.		
<u>Requirement</u> . Review emergency procedures knowledge, recognizing emergencies, applying appropriate procedures, and full/power recovery autorotations.		
<u>Performance Standards</u> . Exhibit the ability to operate the aircraft under all emergency conditions.		
<u>Prerequisites</u> . N/A.		
<u>Ordinance</u> . N/A.		
<u>External Syllabus Support</u> . N/A.		

Crew. CSI (BIP)/PUI.

QUAL-610

E 1 AH-1W A NS

Goal. Tracking Code for TERF qualification.

Requirement. Completion of TERF-211 meets the requirements for the PUI to be TERF qualified. At the discretion of the squadron commanding officer, a letter assigning the PUI as TERF qualified shall be placed in the NATOPS jacket, APR and a Tracking Code of QUAL-610 shall be logged.

Prerequisites. TERF-211.

QUAL-611

E 1 AH-1W A NS

Goal. Tracking Code for NSQ (HLL).

Requirement. Completion of all 200-level night systems events meets the requirements for the PUI to be NSQ (HLL). At the discretion of the squadron commanding officer, a letter assigning the PUI as NSQ (HLL) qualified shall be placed in the NATOPS jacket, APR and a Tracking Code of QUAL-611 shall be logged.

Prerequisites. TERF-211, REC-231, SWD-244, SWD-245, ESC-251, and OAS-262.

QUAL-612

E 1 AH-1W A NS

Goal. Tracking Code for NSQ (LLL).

Requirement. Completion of all ANSQ events meets the requirements for the PUI to be NSQ (LLL). At the discretion of the squadron commanding officer, a letter assigning the PUI as NSQ (LLL) qualified shall be placed in the NATOPS jacket, APR and a Tracking Code of QUAL-612 shall be logged.

Prerequisites. SANSQ-310, ANSQ-311, ANSQ-312, ANSQ-313, ANSQ-314, and ANSQ-315.

QUAL-615

E 1 AH-1W A

Goal. Tracking Code for day Carrier Qualification (CQ).

Requirement. Completion of CQ-330 meets the requirements for the PUI to be CQ qualified. At the discretion of the squadron commanding officer, a letter assigning the PUI as CQ qualified shall be placed in the NATOPS jacket, APR and a Tracking Code of QUAL-615 shall be logged.

Prerequisites. See CQ-433.

QUAL-616

E 1 AH-1W A NS

Goal. Tracking Code for NVD Carrier Qualification (NVD CQ).

Requirement. Completing the requirements of CQ-331 meets the requirements for the PUI to be NVD CQ qualified. At the discretion of the squadron commanding officer, a letter assigning the PUI as NVD CQ qualified shall be placed in the NATOPS jacket, APR and a Tracking Code of QUAL-616 shall be logged.

Prerequisites. See CQ-434.

QUAL-617

E 1 AH-1W A N

Goal. Tracking Code for night unaided Carrier Qualification (Night CQ).

Requirement. Completing the requirements of CQ-430 meets the requirements for the PUI to be Night CQ qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as Night CQ qualified shall be placed in the NATOPS jacket, APR and a Tracking Code of QUAL-617 shall be logged.

Prerequisites. See CQ-435.

QUAL-618

E 2 AH-1W A

Goal. Tracking Code for RWDACM.

Requirement. Completion of the RWDACM stage meets the requirements for the PUI to be RWDACM qualified. At the discretion of the squadron commanding officer, a letter assigning the PUI as RWDACM qualified shall be placed in the NATOPS jacket, APR and a Tracking Code of QUAL-618 shall be logged.

Prerequisites. DACM-413.

QUAL-619

E 2 AH-1W A

Goal. Tracking Code for FWDACM.

Requirement. Completion of the FWDACM stage meets the requirements for the PUI to be DACM qualified. At the discretion of the squadron commanding officer, a letter assigning the PUI as DACM qualified shall be placed in the NATOPS jacket, APR and a Tracking Code of QUAL-619 shall be logged.

Prerequisites. See DACM-416.

QUAL-624

E 1 AH-1W A (NS)

Goal. Tracking Code for FAC(A).

Requirement. Completion of the FAC(A) stage meets the requirements for the PUI to be FAC(A) qualified. At the discretion of the squadron commanding officer, a letter assigning the PUI as FAC(A) qualified shall be placed in the NATOPS jacket, APR and a Tracking Code of QUAL-624 shall be logged.

Prerequisites. See FAC-343.

DESG-630

E 1 AH-1W A (N) (NS)

Goal. Tracking Code for PQM.

Requirement. Completion of the core skill introduction stage meets the requirements for the PUI to be PQM. At the discretion of the squadron commanding officer, a letter assigning the PUI as PQM shall be placed in the NATOPS jacket, APR and a Tracking Code of DESG-630 shall be logged.

Prerequisites. See CSIX-181.

DESG-631

E 1 AH-1W A (NS)

Goal. Tracking Code for Attack Helicopter Commander (AHC).

Requirement. PUI will fly as wingman in the rear seat with a designated section leader on a tactical mission on any of the previously flown OAS or ESC events. Upon completion of that event and at the discretion of the squadron commanding officer, a letter designating the PUI as an AHC shall be

placed in the NATOPS jacket, APR and a Tracking Code of DESG-631 shall be logged.

Prerequisites. Successful completion of the Core Skill Basic phase and the EW, ANSQ, OAS stages of the Core Skill Advanced phase through OAS-324.

DESG-632

E 1 AH-1W A

Goal. OS - Tracking Code for FCP designation.

Requirement. Complete the local requirements for designation by the commanding officer. At the discretion of the squadron commanding officer, a letter designating the pilot as an FCP shall be placed in the NATOPS jacket, APR and a Tracking Code of DESG-632 shall be logged.

Prerequisites. Designated PQM.

4. Section Leader

a. Purpose. To prepare and evaluate the PUI's ability to plan, brief and lead a section of H-1s.

b. General

(1) PUI shall conduct day and night workup sorties in order to develop section leadership. Mixed sections are authorized. Completion of the Section Leader Under Training (SLUT) syllabus meets the requirements for the PUI to be designated a section leader. At the discretion of the squadron commanding officer, a letter designating the pilot as section leader shall be placed in the NATOPS jacket, APR and a Tracking Code of DESG-649 shall be logged. The section leader evaluation will utilize ordnance. Re-designation will require successful completion of the evaluation event (649) only. For the evaluation flight the PUI will fly any of the previously flown Core Skill Basic or Core Skill Advanced sorties in conjunction with the 649 Tracking Code.

(2) After the commanding officer has designated the pilot in writing as a section lead, and to facilitate automated tracking (SARA), the operations department is required to log a DESG-649 (section lead) for the newly designated pilot. This code shall not be logged until the designation letter resides in the pilot's NATOPS and APR.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. The PUI shall demonstrate familiarity with appropriate chapters of the AH-1W TACMAN and local SOPs.

e. Flight and Simulator Event Training. (3 Sorties, 6.0 Hours).

DESG-640

E 2 AH-1W A

Goal. OS - Tracking Code for day section leader training.

Requirement. Plan, brief, lead and debrief a section. The PUI will fly any of the previously flown Core Skill Basic or Core Skill Advanced sorties in conjunction with the 640 Tracking Code.

Performance Standards. Safe completion of the applicable mission as a section leader.

Prerequisites. DESG-631.

Ordnance. Optional.

External Syllabus Support. N/A.

Crew. SEC LDR/PUI.

DESG-641

E 2 AH-1W A NS

Goal. OS - Tracking Code for night section leader training.

Requirement. Plan, brief, lead and debrief a section. The PUI will fly any of the previously flown Core Skill Basic or Core Skill Advanced sorties in conjunction with the 641 Tracking Code.

Performance Standards. Safe completion of the applicable mission as a section leader.

Prerequisites. DESG-631.

Ordnance. Optional.

External Syllabus Support. N/A.

Crew. NSI/PUI.

DESG-649

E 2 AH-1W A (NS)

Goal. OS - Tracking Code for section leader evaluation.

Requirement. Plan, brief, lead and debrief a section on a day or night tactical mission utilizing ordnance. The PUI will

fly any of the previously flown Core Skill Basic or Core Skill Advanced sorties in conjunction with the 649 Tracking Code.

Performance Standards. Safe completion of the applicable mission as a section leader.

Prerequisites. DESG-640 and DESG-641.

Ordnance. 300 rounds 20mm, 7 x 2.75 inch rockets, 1 TOW plug, 1 captive HELLFIRE, 1 captive AIM-9, 20 chaff and 20 flares.

External Syllabus Support. N/A.

Crew. DIV LDR (NSI)/PUI.

5. Division Leader

a. Purpose. To prepare and evaluate the PUI's ability to plan, brief and lead a division of H-1s.

b. General

(1) PUI shall conduct day and night workup sorties in order to develop division leadership. Mixed divisions are authorized. Completion of the Division Leader Under Training (DLUT) syllabus meets the requirements for the PUI to be designated a division leader. At the discretion of the squadron commanding officer, a letter designating the pilot as division leader shall be placed in the NATOPS jacket, APR and a Tracking Code of DESG-659 shall be logged. The division leader evaluation sortie will utilize ordnance. Minimum qualifications will be per NATOPS. Re-designation will require successful completion of the evaluation event (659) only. For the evaluation flight the PUI will fly any of the previously flown Core Skill Basic or Core Skill Advanced sorties in conjunction with the 659 Tracking Code.

(2) After the commanding officer has designated a pilot in writing as a division lead, and to facilitate automated tracking (SARA), the operations department is required to log a DESG-659 (division lead) for the newly designated pilot. This code shall not be logged until the designation letter resides in the pilot's NATOPS jacket and APR.

c. Crew Requirements. As listed at the end of each event.

d. Ground/Academic Training. The PUI shall demonstrate familiarity with appropriate chapters of the AH-1W TACMAN and local SOPs.

e. Flight and Simulator Event Training. (3 Sorties, 6.0 Hours)

DESG-650

E 3+ AH-1W A

Goal. OS - Tracking Code for day division leader training.

Requirement. Plan, brief, lead and debrief a division. The PUI will fly any of the previously flown Core Skill Basic or Core Skill Advanced sorties in conjunction with the 650 Tracking Code. Conduct a minimum of 2 division attacks in the objective area.

Performance Standards. Safe completion of the applicable mission as a division leader.

Prerequisites. DESG-649.

Ordnance. Optional.

External Syllabus Support. N/A.

Crew. DIV LDR/PUI.

DESG-651

E 3+ AH-1W A NS

Goal. OS - Tracking Code for night division leader training.

Requirement. Plan, brief, lead and debrief a division. The PUI will fly any of the previously flown Core Skill Basic or Core Skill Advanced sorties in conjunction with the 651 Tracking Code. Conduct a minimum of two division attacks in the objective area.

Performance Standards. Safe completion of the applicable mission as a division leader.

Prerequisites. DESG-649.

Ordnance. Optional.

External Syllabus Support. N/A.

Crew. DIV LDR (NSI)/PUI.

DESG-659

E 3+ AH-1W A (NS)

Goal. OS - Tracking Code for division leader evaluation.

Requirement. Plan, brief, lead and debrief a division on a day or night tactical mission utilizing ordnance. The PUI will fly any of the previously flown Core Skill Basic or Core Skill Advanced sorties in conjunction with the 659 Tracking Code. Conduct a minimum of 2 division attacks in the objective area.

Performance Standards. Safe completion of the applicable mission as a division leader.

Prerequisites. DESG-650 and DESG-651.

Ordnance. 300 rounds 20mm, 7 x 2.75 inch rockets, 1 TOW plug, 1 captive HELLFIRE, 1 captive AIM-9, 20 chaff and 20 flares.

External Syllabus Support. N/A.

Crew. DIV LDR (NSI)/PUI.

6. Flight Leader

a. Purpose. Prepare and evaluate the PUI's ability to plan, brief and lead a sortie of at least 5 helicopters.

b. General. Flight leader is designated in recognition of experience, demonstrated flight leadership ability and judgment. Work-up for this phase shall consist of completion of the division leader syllabus. Completion of

DESG-669 meets the requirements for the PUI to be designated a flight leader. At the discretion of the squadron commanding officer, a letter designating the pilot as flight leader shall be placed in the NATOPS jacket, APR and a Tracking Code of DESG-669 shall be logged.

c. Crew Requirements. Work-up sorties shall be flown per the division leader syllabus. The DESG-669 evaluation sortie must be flown with a designated flight leader.

d. Ground/Academic Training. The PUI shall demonstrate familiarity with OAS, assault support operations, MACCS and MAGTF integration.

e. Flight and Simulator Event Training. Command specific.

DESG-669

E 5+ AH-1W A (NS)

Goal. OS - Conduct a flight leader check.

Requirement. Plan, brief, lead and debrief a sortie on a day or night tactical mission. The PUI will fly any of the previously flown sorties in conjunction with the 669 Tracking Code.

Performance Standards. Safe completion of the applicable mission as a flight leader.

Prerequisites. DESG-659.

Ordinance. Optional.

External syllabus support. N/A.

Crew. FLT LDR (NSI)/PUI.

7. Air Mission Commander (AMC)

a. Purpose. Prepare and evaluate the PUI's ability to plan, brief and lead an assault support or OAS mission IAW MCCRES/MEU (SOC) standards.

b. General. AMC is designated in recognition of experience, demonstrated flight leadership ability and judgment. Work-up for this phase shall consist of completion of the division leader syllabus. Completion of the DESG-679 meets the requirements for the PUI to be designated an AMC. At the discretion of the squadron commanding officer, a letter designating the PUI as an AMC shall be placed in the NATOPS jacket, APR and a Tracking Code of DESG-679 shall be logged.

c. Crew Requirements. The DESG-679 evaluation must be evaluated by an AMC. There is no requirement for the PUI to conduct aircrew duties during the evaluation.

d. Ground/Academic Training. The PUI shall demonstrate familiarity with OAS, assault support operations, MACCS and MAGTF integration.

e. Flight and Simulator Event Training. N/A.

DESG-679

E (NS)

Goal. OS - Conduct an AMC check.

Requirement. Plan, brief and debrief a sortie as the AMC.

Performance Standards. Safe completion of the applicable mission as an AMC.

Prerequisites. DESG-659.

Ordinance. Optional.

External Syllabus Support. Assault support aircraft, GCE and MACCS agencies as required.

IDSG-680

E 1 AH-1W A

Goal. Tracking Code for BIP designation.

Requirement. Completion of the BIP stage meets the requirements for the IUT to be designated a BIP. At the discretion of the squadron commanding officer, a letter designating the pilot as a BIP shall be placed in the NATOPS jacket, APR and a Tracking Code of IDSG-680 shall be logged.

Performance Standards. See appropriate BIP event.

Prerequisites. This code will be logged in conjunction with the last BIP-500 series that is flown.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. See appropriate syllabus sortie.

IDSG-681

E 1 AH-1W A

Goal. Tracking Code for TERFI designation.

Requirement. Completion of the TERFI stage meets the requirements for the IUT to be designated a TERFI. At the discretion of the squadron commanding officer, a letter designating the pilot as a TERFI shall be placed in the NATOPS jacket, APR and a Tracking Code of IDSG-681 shall be logged.

Performance Standards. See appropriate TERFI sortie.

Prerequisites. This code will be logged in conjunction with the last TERF-500 sortie that is flown.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. See appropriate syllabus sortie.

IDSG-682

E 2 AH-1W A

Goal. Tracking Code for WTO designation.

Requirement. Completion of the WTO stage meets the requirements for the IUT to be designated a WTO. At the

discretion of the squadron commanding officer, a letter designating the pilot as a WTO shall be placed in the NATOPS jacket, APR and a Tracking Code of IDSG-682 shall be logged.

Performance Standards. See appropriate WTO sortie.

Prerequisites. This code will be logged in conjunction with the last WTO-500 series sortie that is flown.

Ordinance. N/A.

External Syllabus Support. N/A.

Crew. See appropriate syllabus sortie.

IDSG-683

E 1 AH-1W A (NS)

Goal. OS - Tracking Code for FAC(A)I designation.

Requirement. Successfully complete the requirements of FAC(A)I. After successfully completing the appropriate MAWTS-1 Course Catalog syllabus and at the discretion of the squadron commanding officer, a letter designating the pilot as a FAC(A)I shall be placed in the NATOPS jacket, APR and a Tracking Code of IDSG-683 shall be logged.

Performance Standards. See MAWTS-1 Course Catalog.

Prerequisites. Per MAWTS-1 Course Catalog requirements.

Ordinance. See MAWTS-1 Course Catalog.

External Syllabus Support. See MAWTS-1 Course Catalog.

Crew. See MAWTS-1 Course Catalog.

IDSG-688

E 2 AH-1W A

Goal. OS - Tracking Code for DACMI designation.

Requirement. Successfully complete the requirements of DACMI. After successfully completing the appropriate MAWTS-1 Course Catalog syllabus and at the discretion of the squadron commanding officer, a letter designating the pilot as a DACMI shall be placed in the NATOPS jacket, APR and a Tracking Code of IDSG-688 shall be logged.

Performance Standards. See MAWTS-1 Course Catalog.

Prerequisites. Per MAWTS-1 Course Catalog requirements.

Ordinance. See MAWTS-1 Course Catalog.

External Syllabus Support. See MAWTS-1 Course Catalog.

Crew. See MAWTS-1 Course Catalog.

IDSG-694

E 1 AH-1W A NS

Goal. OS - Tracking Code for NSFII designation.

Requirement. Successfully complete the requirements of NSFI. After successfully completing the appropriate MAWTS-1 Course Catalog syllabus and at the discretion of the squadron commanding officer, a letter designating the pilot as an NSFI shall be placed in the NATOPS jacket, APR and a Tracking Code of IDSG-694 shall be logged.

Performance Standards. See MAWTS-1 Course Catalog.

Prerequisites. Per MAWTS-1 Course Catalog requirements.

Ordinance. See MAWTS-1 Course Catalog.

External Syllabus Support. See MAWTS-1 Course Catalog.

Crew. See MAWTS-1 Course Catalog.

IDSG-696

E 2 AH-1W A NS

Goal. OS - Tracking Code for NSI designation.

Requirement. Successfully complete the requirements of NSI. After successfully completing the appropriate MAWTS-1 Course Catalog syllabus and at the discretion of the squadron commanding officer, a letter designating the pilot as an NSI shall be placed in the NATOPS jacket, APR and a Tracking Code of IDSG-696 shall be logged.

Performance Standards. See MAWTS-1 Course Catalog.

Prerequisites. Per MAWTS-1 Course Catalog requirements.

Ordinance. See MAWTS-1 Course Catalog requirements.

External Syllabus Support. See MAWTS-1 Course Catalog.

Crew. See MAWTS-1 Course Catalog.

IDSG-699

E 1 AH-1W A (NS)

Goal. OS - Tracking Code for WTI designation.

Requirement. Successfully complete the requirements of WTI. This code shall be logged in conjunction with the appropriate MAWTS-1 Course Catalog syllabus event.

Performance Standards. See MAWTS-1 Course Catalog.

Prerequisites. Per MAWTS-1 Course Catalog requirements.

Ordinance. See MAWTS-1 Course Catalog.

External Syllabus Support. See MAWTS-1 Course Catalog.

Crew. See MAWTS-1 Course Catalog.

151. SPECIFIC OPERATIONS TRACKING CODES

1. Purpose. To provide a vehicle for Tracking Codes associated with specific missile/Precision Guided Munitions (PGM).

2. Missile/PGM Tracking Codes. Per T&R Program Manual, each Naval Aviator assigned to a squadron should fire at least 1 of each applicable missile/PGM during a 3-year period.

SOTC-710

E 1 AH-1W A (NS)

Goal. FS - Tracking Code for a live TOW missile shoot.

Requirement. This event code is for tracking purposes only. This sortie should be conducted in conjunction with another syllabus event. Only pilot firing TOW receives event code.

Ordnance. 1 live TOW missile.

Crew. WTO (NSI)/PUI.

SOTC-711

E 1 AH-1W A (NS)

Goal. OS - Tracking Code for a live HELLFIRE missile shoot.

Requirement. This event code is for tracking purposes only. This sortie should be conducted in conjunction with another syllabus event. Only pilot firing HELLFIRE receives event code.

Ordnance. 1 live HELLFIRE missile.

Crew. WTO (NSI)/PUI.

SOTC-712

E 1 AH-1W A (NS)

Goal. RS - Tracking Code for a live Sidewinder missile shoot.

Requirement. This event code is for tracking purposes only. This sortie should be conducted in conjunction with another syllabus event. Only pilot firing Sidewinder receives event code.

Ordnance. 1 live Sidewinder missile.

Crew. WTO (NSI)/PUI.

160. ORDNANCE REQUIREMENTS. Annual ordnance requirements are developed on a "per crew" basis per OPNAVNOTE 8010.

1. Additional ordnance requirements such as initial TOW and HELLFIRE qualification, illumination, expendables and WP for FAC(A) target marking are specified for certain events.

2. Expendable Ordnance

BASIC/TRANSITION/CONVERSION (per pilot)

ORDNANCE	100	200	300	400	REFRESH	IUT	ANNUAL*
2.75 inch (1)	19	28	59	14	70	11	62 (2)
5 inch	4	4	8	4	0	0	0
20mm	800	1600	1400	1300	2800	600	2500 (3)
TOW missiles	0	1	0	0	1	0	1 (4)
HELLFIRE	0	1	0	0	1	0	1
Illumination Flares	0	0	7	0	0	0	0
Chaff	0	30	80	120	150	20	100
Decoy flares	0	30	200	360	320	40	180

NOTES: * Annual ordnance requirements to maintain aircrew proficiency derived from MAINTAIN table and refly interval.

(1) 5.00 inch rockets may be substituted for 2.75 inch rockets.

(2) 40% HE, 30% inert, 30% WP.

(3) 30% HEI/SAPHEI, 70% TPT.

(4) 1 live TOW should be substituted for 1 live Hellfire for the semi-annual update of OAS 242.

3. Captive Ordnance

BASIC/TRANSITION/CONVERSION

ORDNANCE	100 SERIES	200 SERIES	300 SERIES	400 SERIES	REFRESH	IUT	ANNUAL *
TOW	0	8	5	2	7	2	12
AGM-114B	0	8	6	2	7	2	10
AIM-9	0	3	1	1	4	1	3
AGM-122A	0	0	0	0	0	0	0

4. Ground Ordnance

BASIC/TRANSITION/CONVERSION

ORDNANCE	100 SERIES	200 SERIES	300 SERIES	400 SERIES	REFRESH	IUT	ANNUAL *
HE Artillery	0	0	10	10	0	0	10
WP Artillery	0	0	6	6	0	0	6
CAS Bombs	0	0	24	24	8	0	24

NOTE: * Annual ordnance requirements to maintain aircrew proficiency.

	INITIAL CREW (1)	REFRESHER CREW (2)	PROFICIENT CREW (3)
2.75" RKTS - HE/Inert	118	98	110
2.75" RKTS - WP/RP	42	42	14
2.75" RKTS - ILLUM	14	0	0
5" RKTS - HE/Inert	24	0	0
20MM HEI/SAPHEI	1800	1600	1500
20MM TPT	4200	3800	3500
TOW	2	2	1
HELLFIRE	2	2	1
CHAFF	220	300	200
FLARES	920	640	360
NUMBER OF SQDN CREW/CATEGORY (4)	8	7	7
<p>General: In these calculations ordnance is always included on ordnance optional sorties. Requirements are per crew. Assumption is that Initial/Refresher syllabus may be completed in 1 year.</p> <ol style="list-style-type: none"> 1. "Initial" Basic crews shall fly all 200 and 300 level events. 2. "Refresher" crews shall fly all "R" coded 200 and 300 level events. 3. "Proficient" crews as defined by the "core skill proficiency" table in paragraph 5f on page 5. 4. Based on a full HMLA T/O of 44 AH pilots (22 crews), with the assumption that roughly 1/3 fall into each POI category. 			

ANNUAL SQUADRON REQUIREMENTS				
	INITIAL CREW x 8	REFRESHER CREW x 7	PROFICIENT CREW x 7	ANNUAL SQUADRON TOTAL
2.75" RKTS - HE/Inert	944	686	770	2400
2.75" RKTS - WP/RP	336	294	98	728
2.75" RKTS - ILLUM	112	0	0	112
5" RKTS - HE/Inert	192	0	0	192
20MM HEI/SAPHEI	14,400	11,200	10,500	36,100
20MM TPT	33,600	26,600	24,500	84,700
TOW	16	14	7	37
HELLFIRE	16	14	7	37
CHAFF	1760	2100	1400	5260
FLARES	7360	4480	2520	14360

CORE INTRODUCTION PHASE														
STAGE	CODE	HRS	SIM	REFLY	CRP	C	R	M	E	N	NS	A/C SIM	A/C	SEAT
FAM	00					X	X	X				STATIC	1	
FAM	000					X						STATIC	1	
SFAM	100		1.5	*	0.8	X						S		RS
SFAM	101		1.5	*	0.8	X						S		FS
FAM	102	2.0		*	0.8	X						A	1	FS
FAM	103	2.0		*	0.8	X	X	X				A	1	FS
SFAM	104		1.5	*	0.8	X						S		RS
FAM	105	2.0		*	0.8	X						A	1	RS
FAM	106	2.0		*	0.8							A	1	RS
FAM	107	2.0		*	0.8	X						A	1	RS
FAM	108	2.0		*	0.8	X						A	1	RS
FAM	109	2.0		*	0.8	X	X	X				A	1	RS
FAM	110	2.0		*	0.8	X	X	X		(N)	(NS)	A/S	1	FS
SFAM	111		1.5	*	0.8	X	X			N		S		FS
FAM	112	2.0		*	0.8					N		A	1	FS
FAM	113	2.0		*	0.8	X	X	X		N		A	1	RS
SFAM	114		1.5	*	0.8						NS	S		FS
FAM	115	2.0		*	0.8	X					NS	A	1	FS
FAM	116	2.0		*	0.8	X	X	X			NS	A	1	RS
FAM	117	2.0		*	0.8	X						A	1	RS
FAM	118	2.0		*	1.0	X	X		X			A	1	RS
SINST	120		1.5	*	0.8	X						S		RS
SINST	121		1.5	*	0.8	X	X	X				S		RS
SINST	122		1.5	*	0.8	X	X	X				S		RS
INST	123	2.0		*	0.8	X	X	X		(N)		A	1	RS
INST	125	2.0		*	0.8	X	X	X	X	(N)		A/S	1	RS
FORM	130	2.0		*	0.8							A	2	FS
FORM	131	2.0		*	0.8	X	X	X				A	2	RS
FORM	132	2.0		*	0.8	X	X				NS	A	2	RS
FORM	133	2.0		*	0.8	X						A	3+	RS
TERF	140	2.0		*	0.8	X						A	1	FS
TERF	141	2.0		*	0.8	X	X	X				A	1	RS
TERF	142	2.0		*	0.8	X	X	X			NS	A	1	FS
NAV	150	2.0		*	0.8							A	2	FS
NAV	151	2.0		*	0.8	X						A	2	OS
NAV	152	2.0		*	0.8	X	X				NS	A	2	FS
SSWD	160		1.5	*	0.8	X	X					S		FS
SWD	161	2.0		*	0.8	X						A	2	FS
SSWD	162		1.5	*	0.8	X	X					S		RS
SWD	163	2.0		*	0.8	X						A	2	RS
SWD	164	2.0		*	0.8	X			X			A	2	RS
SSWD	165		1.5	*	0.8	X	X	X				S		FS
TAC	170	2.0		*	1.0	X						A	2	FS
SCSIX	180		1.5	*	0.8	X	X	X				S		RS
CSIX	181	2.0		*	1.0	X	X	X	X			A	1	RS
SUB TOTAL 100		62.0	18.0		35									
CRP PRE 100					25									
100 LEVEL TOTAL		62.0	18.0		60									

Figure 2.--MOS 7565 Refly Interval, Combat Readiness Percentage.

CORE SKILL BASIC PHASE													
STAGE	CODE	HRS	SIM	REFLY	CRP	C	R	E	N	NS	A/C SIM	A/C	SEAT
TERF	210	2.0		120	1.0						A	2	FS
TERF	211	2.0		120	1.0	X	X			NS	A	2	RS
REC	230	2.0		120	1.0	X					A	2	FS
REC	231	2.0		120	1.0	X	X			NS	A	2	FS
SSWD	240		1.5	365	1.0	X	X				S		FS
SWD	241	2.0		365	0.7	X				(NS)	A	2	FS
SWD	242	2.0		120	1.0	X	X			(NS)	A	2	FS
SSWD	243		1.5	365	1.0	X				(NS)	S/A		RS
SWD	244	2.0		180	1.0	X				NS	A	2	RS
SWD	245	2.0		180	1.0	X				NS	A	2	OS
ESC	250	2.0		365	0.7	X					A	2	OS
ESC	251	2.0		365	1.0	X	X			NS	A	2	OS
ESC	252	2.0		365	0.6	X				(NS)	A	2	OS
SOAS	260		1.5	365	1.0	X					S		FS
OAS	261	2.0		120	1.0	X					A	2	OS
OAS	262	2.0		180	1.0	X	X			NS	A	2	FS
Sub Total 200		26.0	4.5		15.0								
Total 100		62.0	18.0		60.0								
Total 100 & 200		88.0	22.5		75.0								
Figure 2.--MOS 7565 Refly Interval, Combat Readiness Percentage--Continued.													

CORE SKILL ADVANCED PHASE													
STAGE	CODE	HRS	SIM	REFLY	CRP	C	R	E	N	NS	A/C SIM	A/C	SEAT
SEW	300		1.5	365	1.0	X	X				S		RS
EW	301	2.0		730	1.0	X					A	1	RS
SANSQ	310		1.5	365	1.0	X				NS	S		RS
ANSQ	311	2.0		180	1.0	X	X			NS	A	1	FS
ANSQ	312	2.0		180	1.25	X	X			NS	A	2	RS
SANSQ	313		1.5	365	1.0	X				NS	S		RS
ANSQ	314	2.0		180	1.25	X	X			NS	A	2	RS
ANSQ	315	2.0		365	1.25	X				NS	A	2	OS
OAS	320	2.0		180	1.25	X					A	2	FS
OAS	321	2.0		180	1.25	X					A	2	RS
OAS	322	2.0		730	1.0	X				NS	A	3	RS
OAS	323	2.0		180	1.75	X	X			NS	A	2	RS
OAS	324	2.0		180	1.75	X	X			NS	A	2	FS
FAC	340	2.0		365	1.0	X	X				A	1	OS
FAC	341	2.0		365	1.0	X	X				A	2	OS
FAC	342	2.0		365	1.0	X	X			NS	A	2	OS
FAC	343	2.0		365	1.25	X	X			(NS)	A	2	OS
Sub Total 300		28.0	4.5		20.0								
Total 100 & 200		90.0	22.5		75.0								
Total 100, 200 & 300		118.0	27.0		95.0								
Figure 2.--MOS 7565 Refly Interval, Combat Readiness Percentage--Continued.													

CORE SKILL PLUS QUALIFIED PHASE													
STAGE	CODE	HRS	SIM	REFLY	CRP	C	R	E	N	NS	A/C SIM	A/C	SEAT
OAS	400	2.0		730	0.50	X				(NS)	A	2	OS
OAS	401	2.0		730	0.50	X	X			(NS)	A	3+	OS
OAS	402	2.0		365	0.50	X				(NS)	A	3+	OS
OAS	403	2.0		365	0.50	X	X			NS	A	2	OS
OAS	404	2.0		730	0.50	X	X				A/S	2	OS
OAS	405	2.0		730	0.50	X	X			NS	A	2	OS
DACM	410	2.0		730	0.2	X					A	2	RS
DACM	411	2.0		730	0.2	X					A	1	RS
DACM	412	2.0		730	0.2	X					A	2	RS
DACM	413	2.0		730	0.25	X	X				A	2	RS
DACM	414	2.0		730	0.2	X	X				A	1	RS
DACM	416	2.0		730	0.25	X	X				A	2	RS
NBC	420	1.0		730	0.1	X	X				A/S	1	RS
SFCLP	430	0	1.5	365	0.1	X					S		OS
FCLP	431	1.0		365	0.1	X	X				A	1	OS
FCLP	432	1.0		365	0.1	X	X			NS	A	1	OS
CQ	433	1.0		365	0.1	X	X				A	1	OS
CQ	434	1.0		365	0.1	X	X			NS	A	1	OS
CQ	435	1.0		365	0.1	X	X		N		A	1	OS
Sub Total 400		30.0	1.5		5.0								
Total 100, 200, & 300		116.0	27.0		95.0								
Total 100, 200, 300, & 400		146.0	28.5		100.0								
Figure 2.--MOS 7565 Refly Interval, Combat Readiness Percentage--Continued.													

INSTRUCTOR TRAINING PHASE													
STAGE	CODE	HRS	SIM	REFLY	CRP	C	R	E	N	NS	A/C SIM	A/C	SEAT
SBIP	500		1.5		*	X					S		OS
BIP	501	2.0			*	X			(N)		A	1	FS
BIP	502	2.0			*	X	X		(N)		A	1	FS
BIP	503	2.0			*	X	X		(N)		A/S	1	FS
BIP	504	2.0			*	X	X				A	2	FS
TERF	510	2.0			*	X					A	1	OS
TERF	511	2.0			*	X	X				A	2	OS
SWTO	520		1.5		*	X					S		FS
SWTO	521		1.5		*	X	X				S		RS
WTO	522	2.0			*	X					A	2	FS
WTO	523	2.0			*	X	X				A	2	RS
Sub Total 500 Level		16.0	4.5										
Figure 2.--MOS 7565 Refly Interval, Combat Readiness Percentage--Continued.													

REQUIREMENTS, QUALIFICATIONS, DESIGNATIONS, INSTRUCTOR DESIGNATIONS											
STAGE	CODE	HRS	REFLY INT	TRACK	E	N	NS	A/C OR SIM	A/C	SEAT	NOTES
RQRD	600	1.5	365		X	(N)		A/S	1	RS	INST CHECK
RQRD	601	1.5	365		X	(N)	(NS)	A	1	RS	NATOPS CHECK/PQM
RQRD	602	1.5	180		X			S			EP SIM,REFRESHER CONVERSION
QUAL	610		*	X	X		NS	A	1		TERF QUAL
QUAL	611		*	X	X		NS	A	1		NSQ(HLL) QUAL
QUAL	612		*	X	X		NS	A	1		NSQ(LL) QUAL
QUAL	615		*	X	X			A	1		CQ QUAL
QUAL	616		*	X	X		NS	A	1		CQ AIDED QUAL
QUAL	617		*	X	X	N		A	1		CQ UNAIDED QUAL
QUAL	618		*	X	X			A	2		RWDACM QUAL
QUAL	619		*	X	X			A	2		FWDACM QUAL
QUAL	624		*	X	X		(NS)	A	1		FAC(A) QUAL
DESG	630		*	X	X	(N)	(NS)	A	1		PQM
DESG	631		*	X	X		(NS)	A	1		AHC
DESG	632		*	X	X			A	1	OS	FCP
DESG	640		*	X	X			A	2	OS	SLUT
DESG	641		*	X	X		NS	A	2	OS	NIGHT SLUT
DESG	649		*	X	X		(NS)	A	2	OS	SEC LEADER
DESG	650		*	X	X			A	3+	OS	DLUT
DESG	651		*	X	X		NS	A	3+	OS	NIGHT DLUT
DESG	659		*	X	X		(NS)	A	3+	OS	DIV LEADER
DESG	669		*	X	X		(NS)	A	5+	OS	FLIGHT LEADER
DESG	679		*	X	X		(NS)	A		OS	AMC
IDSG	680		*	X	X			A	1		BIP
IDSG	681		*	X	X			A	1		TERFI
IDSG	682		*	X	X			A	2		WTO
IDSG	683		*	X	X		(NS)	A	1	OS	FAC(A)I
IDSG	688		*	X	X			A	2	OS	DACM(I)
IDSG	694		*	X	X		NS	A	1	OS	NSFI
IDSG	696		*	X	X		NS	A	2	OS	NSI
IDSG	699		*	X	X		(NS)	A	1	OS	WTI
SOTC	710		*	X	X		(NS)	A	1	FS	LIVE TOW
SOTC	711		*	X	X		(NS)	A	1	OS	LIVE HELLFIRE
SOTC	712		*	X	X		(NS)	A	1	RS	LIVE SIDEWINDER
		FLT HRS									
Sub Total		3.0 3.0									

Figure 2.--MOS 7565 Refly Interval, Combat Readiness Percentage--Continued.

AH-1W PILOT EVENT UPDATE CHAINING

Codes appearing in parenthesis are chain updated if the chaining event is completed using Night Systems (NS) or under the light level conditions as annotated. The IP shall ensure the appropriate codes are logged if mission execution results in flying multiple codes that are not annotated on the flight schedule.

<u>STAGE</u>	<u>EVENT</u>	<u>EVENTS UPDATED</u>
TERF	210	
TERF	211	210
REC	230	210
REC	231	210, 211, 230
SSWD	240	
SWD	241	210, 230, 240 (211 NS), (231 NS)
SWD	242	210, 230, 240, 241 (211 NS), (231 NS)
SSWD	243	
SWD	244	210, 211, 230, 231, 243
SWD	245	210, 211, 230, 231, 242, 243, 244
ESC	250	210, 230
ESC	251	210, 211, 230, 231, 250
ESC	252	210, 230, (211 NS), (231 NS)
SOAS	260	240
OAS	261	210, 230, 240, 242, 243, 260
OAS	262	210, 211, 230, 231, 240, 241, 242, 260, 261
SEW	300	
EW	301	210, 230, 300
SANSQ	310	
ANSQ	311	230, 231, 310
ANSQ	312	210, 211, 230, 231
SANSQ	313	243
ANSQ	314	210, 211, 230, 231, 243, 244, 245, 312
ANSQ	315	210, 211, 230, 231,
OAS	320	210, 230, 240, 242
OAS	321	210, 230, 242, 243, 260, 261, 320
OAS	322	210, 211, 230, 231, 243, 244, 245, (312 LLL), (314 LLL)
OAS	323	210, 211, 230, 231, 243, 244, 245, 260, 261, 262, 320, 321, (312 LLL), (314 LLL)
OAS	324	210, 211, 230, 231, 240, 242, 245, 260, 261, 300, 301, 320

Figure 3.--AH-1 Pilot Event Update Chaining.

AH-1W PILOT EVENT UPDATE CHAINING

<u>STAGE</u>	<u>EVENT</u>	<u>EVENTS UPDATED</u>
FAC	340	210, 230
FAC	341	210, 230
FAC	342	210, 211, 230, 231
FAC	343	210, 211, 230, 231, 341, (342 LLL)
OAS	400	210, 230, (211 NS), (231 NS)
OAS	401	210, 230, 250, 320, (211 NS), (231 NS), (251 NS), (312 LLL), (313 LLL)
OAS	402	210, 230, 300, 301, 320, (211 NS), (231 NS), (243 NS), (244 NS), (245 NS), (312 LLL), (313 LLL), (314 LLL)
OAS	403	210, 211, 230, 231, 243, 244, 245, 320, 402, (312 LLL), (313 LLL), (314 LLL)
OAS	404	210, 230, 242, 260, 261, 320, 321
OAS	405	210, 211, 230, 231, 242, 260, 261, 320, 321, 323, 404, (312 LLL), (313 LLL), (314 LLL)
DACM	410	
DACM	411	
DACM	412	411
DACM	413	411, 412
DACM	414	
DACM	416	414
NBC	420	
SFCLP	430	
FCLP	431	430
FCLP	432	430, 431
CQ	433	430, 431
CQ	434	430, 431, 432, 433
CQ	435	430, 431, 433

Figure 3.--AH-1 Pilot Event Update Chaining--Continued.

OLD	OLD	NEW	NEW
STAGE	CODE	STAGE	CODE
200 LEVEL			
SFCLP	200	SFCLP	430
FCLP	201	FCLP	431
	202		432
300 LEVEL			
CQ	330	CQ	433
	331		434
400 LEVEL			
CQ	430	CQ	435

Figure 4.--MOS 7565 Syllabus Event Conversion Matrix.